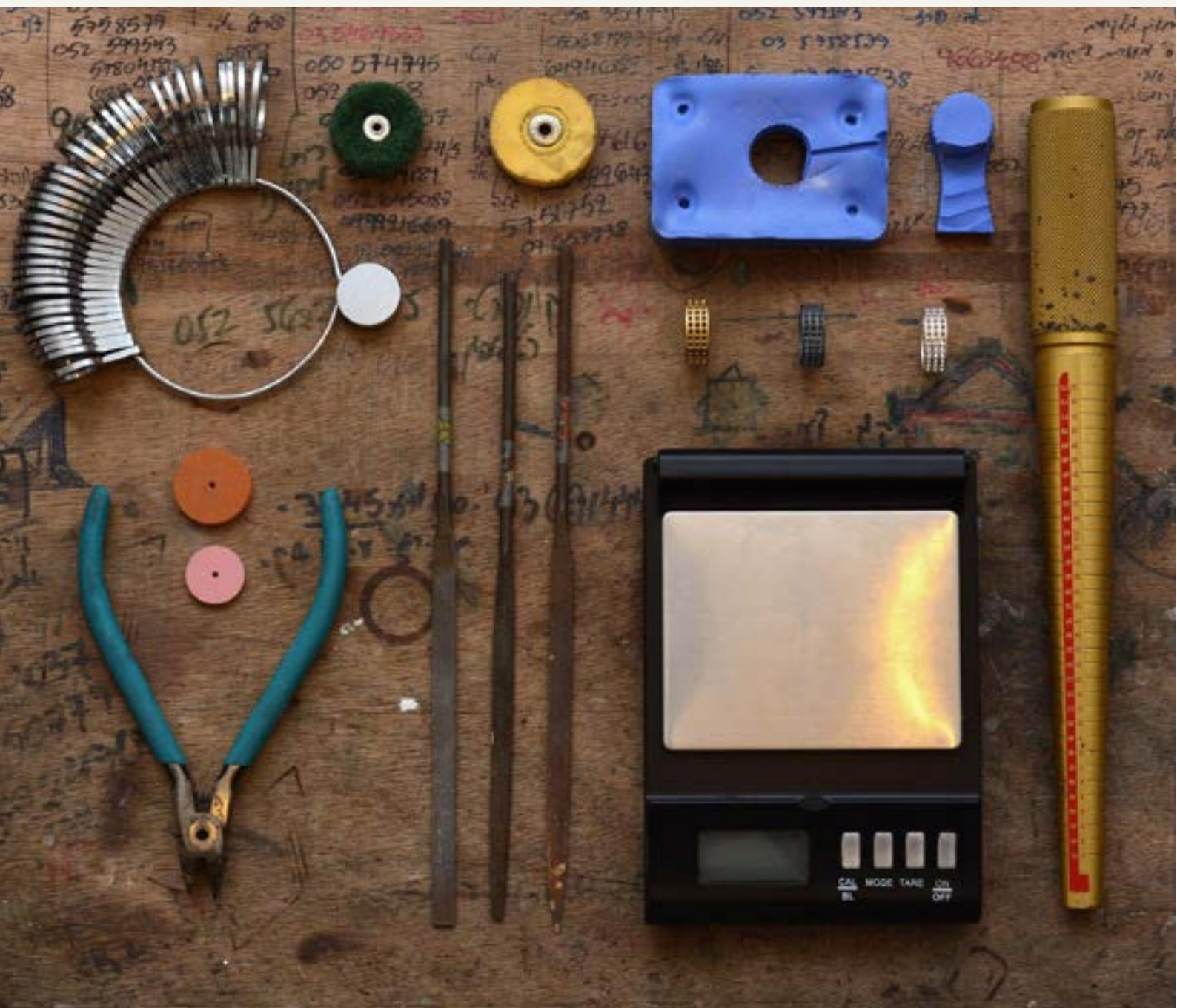




LABELED PRODUCTS PRODUCTION GUIDE



ABOUT

This guide was created to facilitate the understanding of the Fairmined labeled traceability and composition rules.

It will walk you through the different steps of the jewelry production process, describing the process itself and possible risks for the traceability of the Fairmined metals.

It also contains mitigation strategies that should be implemented by the licensed brands and authorized suppliers to guarantee the complete traceability of the Fairmined metal(s) and compliance of the product composition rules. Best practices are also introduced but are not mandatory.

If you have any questions please contact us at info@fairmined.org.

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MAIN RULES

To promote jewelry pieces as Fairmined labeled products, licensed brands need to comply with the strict traceability and composition rules of the Fairmined labeled sourcing model.

ELIGIBLE PRODUCTS

- Jewelry and semi-finished jewelry components, including watches
- Coins, ingots and bullion products of a commemorative and/or financial nature
- Medals and trophies
- Religious objects
- Gold and gold sheets for artistic/manual/mechanical or / electric/chemical
- Medicine

EXCEPTIONS

For products which are not listed, please contact the Standards and Certification department of the Alliance for Responsible Mining to evaluate the case at cert@responsiblemines.org



TRACEABILITY

TRACEABILITY is the **ability to guarantee the responsible provenance** of metals extracted by Fairmined certified artisanal and small-scale mining organizations. The measures implemented by each actor in the Fairmined chain **ensure the veracity of their sustainability and social responsibility claims and corroborate their commitment** to the transformation of the artisanal and small-scale mining sector.

Maintaining the physical and documental traceability of the Fairmined metals is important as it ensures to consumers that a specific item is made with Fairmined certified metals. All the actors that handle the certified gold and/or silver have to ensure full compliance with traceability requirements at all times:

Physical traceability:

Complete separation of a specific Fairmined certified metal from other sources of the same metal. Each actor in the Fairmined initiative is responsible for ensuring the traceability of the metals, from the moment they are received until they are delivered, whether it is in the extraction, transformation or manufacturing processes of the final products.

Practical Implications for the production:

- No mass balance or mixing of sources with non-Fairmined gold is allowed. Joining, blending, and consolidating volumes of Fairmined gold are allowed at any stage.
- If you are working with Fairmined and Fairmined ecological metals, a complete segregation of the two is required. If Fairmined ecological metals are mixed with Fairmined metals they will lose their ecological attribute.

Documental traceability:

All documents related to the extraction, processing, transportation, handling, trading of Fairmined certified metals (e.g. invoices, protocols, contracts...) are clear, well kept, and can be presented in case of audits. These documents must corroborate the provenance of the metals declared as certified. This evidence will support any claims regarding Fairmined.

COMPOSITION RULES

100% OF THE GOLD MUST BE FAIRMINED CERTIFIED.

EXCEPTIONS:

- **Any pre-fabricated items** that are not available from Fairmined sources can be used in a Fairmined labeled product, but must not exceed 15% of the total fine gold content of the piece. The Fairmined certified gold must constitute at least 85% of the gold used in the jewelry product.
- **Lock mechanisms:** If the jewelry piece is part of a collection and if there are no Fairmined suppliers who offer the lock mechanism or it cannot be reasonably produced by Fairmined suppliers. This exemption must be consulted with your Fairmined account manager.
- **Mechanical elements of watches** don't have to be in Fairmined metals, only the watch case must be made 100% from Fairmined gold.

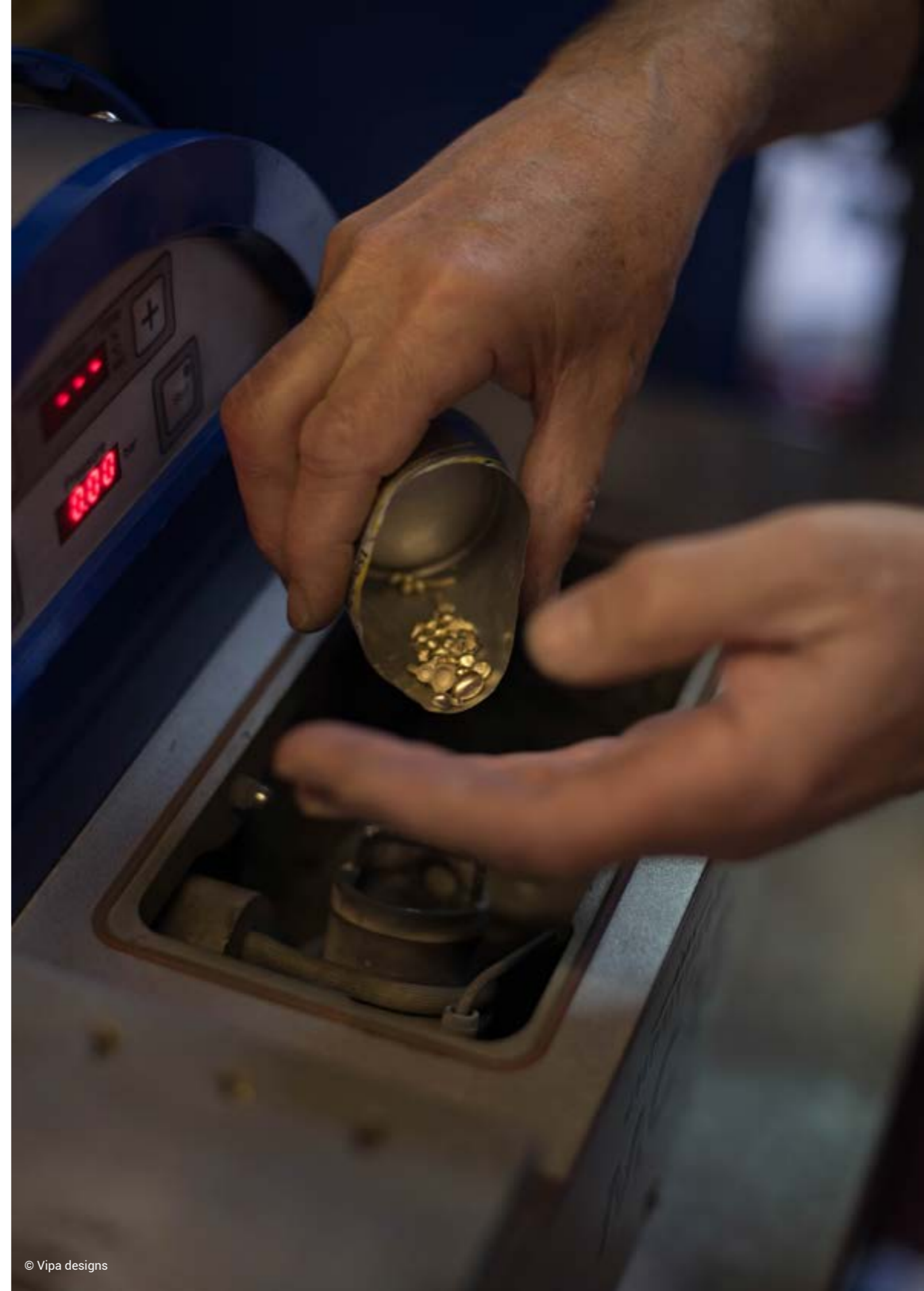
Minimum purity of pieces to be able to claim them as Fairmined



**GOLD ALLOYS, PLATING, COATING AND GILDING:
100% OF THE GOLD MUST BE FAIRMINED.**

The use of Fairmined certified silver is voluntary and remains at the discretion of the manufacturer. The use of non-certified metals such as copper or rhodium is authorized. However, if a product sold as made of Fairmined Silver, the silver must be 100% Fairmined.

If a product doesn't comply with those rules the piece cannot be hallmarked or labeled as a product made of Fairmined metals.



GENERAL RECOMMENDATIONS

PURCHASES, STOCK AND HANDLING OF FAIRMINED METALS

- Fairmined metals can only be purchased from [Fairmined Authorized Suppliers](#).
- Every purchase made by a Fairmined licensed brand or its subcontractor **must be reported on the Fairmined Connect Platform**. This transaction will be reported by the supplier and then confirmed by the brand.
- The **certified metals need to be stored separately or clearly labeled** to avoid mixing them.
- A **register should be maintained to keep track of the use of the certified metals at the different stages of the production**. Brands can use their own control system or can use [model of register](#).
- **Tools and surfaces should be cleaned before working with Fairmined metals** in order to avoid mixing them with non-certified metals.

SCRAP MANAGEMENT

Many processes in jewelry fabrication produce scraps, particles or granulates. The collection of scraps is **common practice** when working with fine metals. When working with Fairmined metals it is important to guarantee a **complete separation of Fairmined scraps from any other metal scraps** to allow them to re-enter in the production circle as certified metals.

If you work with other sources of metal, make sure to clean the work table and surface with a brush. Brush your tools to remove any small non-certified particles that are stuck in them. After collecting all the scraps make sure to separate them completely and store them in different boxes or bags. This will allow you afterwards to refine Fairmined scraps without losing their certification status.

- If you have all the equipment to melt the scraps in your workshop or factory, make sure to use a **dedicated ceramic bowl** to melt Fairmined metals, to avoid any mixing with non-certified metals.
- If you don't have the equipment in your workshop you can resell the collected Fairmined scraps to a Fairmined authorized supplier. This transaction will be reported by your supplier on the [Fairmined Connect](#).

BEST PRACTICES:

- If possible, makers should have tools designated to process Fairmined metals.
- Dedicated tools should be used for polishing items that contain certified metals.
- Use a specific color code and separate containers to clearly identify the certified metals ..from the rest of the metals.

BEST PRACTICES:

- If possible, makers should have tools designated to process Fairmined scraps.
- Ultrasonic and tumbling machines should be cleaned to minimize the mix of scraps
- Keep your scraps separated by alloy to facilitate their recycling.

SUBCONTRACTING OF PRODUCTION PROCESSES

Most of the processes described in this document can be done in-house by the brand or by specialized providers. It is recommended that licensed brands outsource their production processes only to Fairmined authorized suppliers (see [this list](#)), however brands can also work with other providers.

In that case, the brand must ensure that their provider(s) adapt their processes and comply with the rules of product composition and traceability of the Fairmined standard.

[Model agreements](#) are available for the brands to use with their subcontractors to formalize their commitment with the Fairmined standard requirements. Furthermore, the subcontractor shall provide a workflow chart explaining how they will handle the Fairmined metals and jewelry pieces and assure physical traceability.

An audit can be performed to verify the compliance of the subcontractors. All **transactional documents** between Fairmined licensed brands and subcontractors that involve the handling of Fairmined metals (contracts, agreement, invoice, register of the labeled Fairmined pieces) **must be kept** for eventual audits. The compliance of the subcontractor(s) can be required to be verified within the licensed brand's audit.

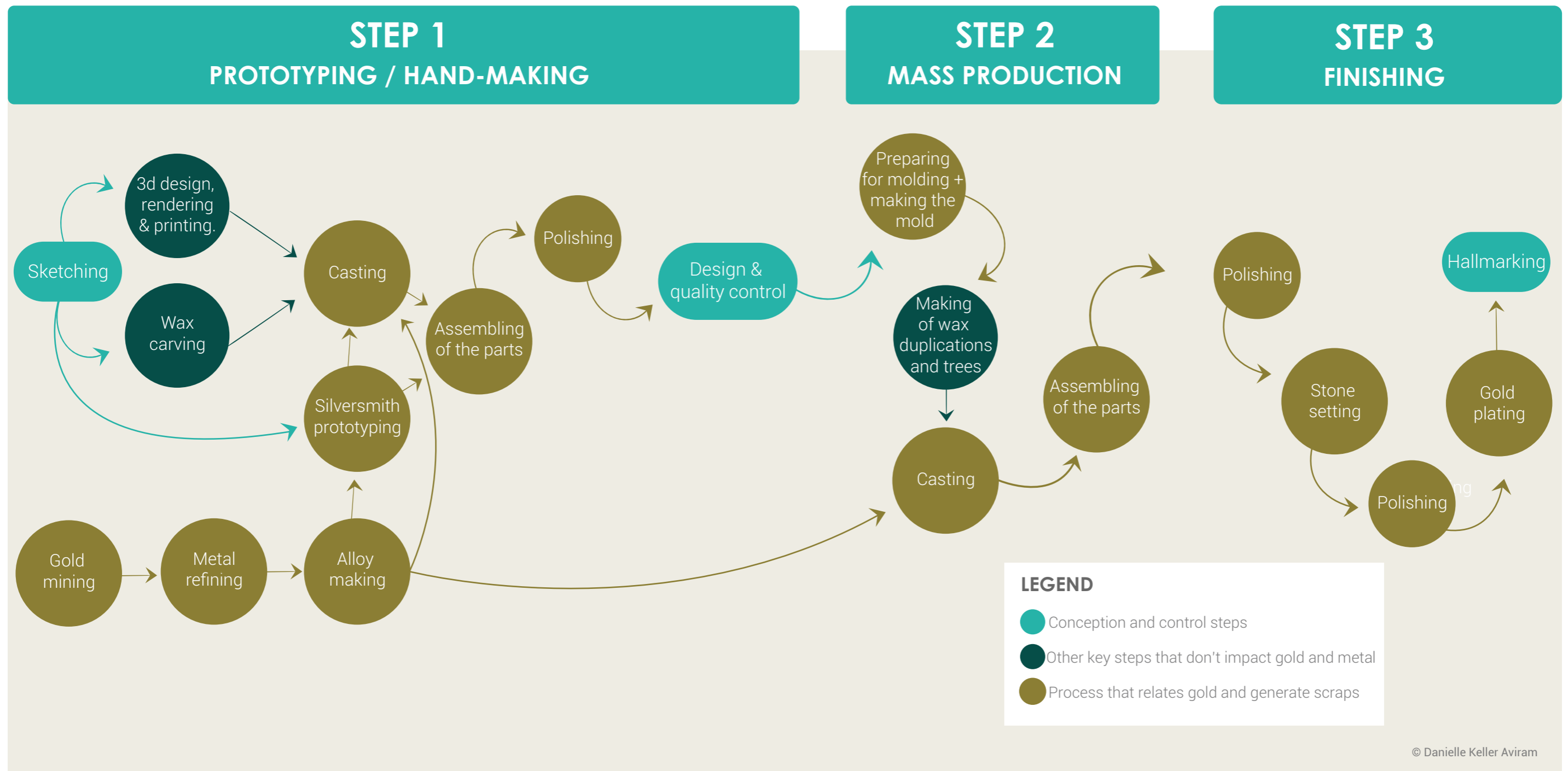


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JEWELRY MAKING PROCESS

Step 1 is always present in every jewelry production process and may be combined with **step 2 and 3**, depending of the production model of the brand.

Some brands may only offer handmade jewelry, while other brands will mainly offer mass produced pieces allowing the duplication of some specific styles. The finishing steps are not mandatory and depends of the style of the designer and of the collection, but the majority of the jewelry items will pass at least one of these finishings steps.



STEP 1: PROTOTYPING & HAND MAKING

SKETCHING

THE PROCESS

The designer or design team draws an item on paper or using a 2D program. As part of this process, the designer highlights all the decorative and functional elements that will composite this item, including all the colors and ideal materials that will be used. After the sketch is finished, based on the different elements in the jewel and its final look and appearance, a method or technique is chosen to transform the sketch into a 3D object. This step is generally done in-house.

TRACEABILITY RISKS: NONE

BEST PRACTICES:

- Ensure that all the findings and elements necessary to manufacture the designed piece can be sourced in Fairmined gold or silver, such as: chains, locks, etc.
- If some findings cannot be sourced in Fairmined metals, either modify the design or make sure that the piece with non-certified parts will still comply with the Fairmined product composition rules. In this case, the brand must calculate the pure gold content of the whole piece and the pure gold content of the non-certified findings. The non-certified elements can't represent more than 15% of the total gold content of the piece to be able to label the piece as Fairmined.



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SILVERSMITHING PROTOTYPING

THE PROCESS

In this step, the sketch is turned into a tangible 3D jewel. As part of this process, the maker can use different techniques like sawing the metal sheets/wire, hammering the metal, rolling parts, flattening and shallowing the metal, welding, and soldering the different elements that assemble the item. These techniques are either used to produce prototypes or handmade jewelry.

This process can be done in-house or could be outsourced.

TRACEABILITY RISKS: HIGH

- Make sure that the scraps of certified metals resulting from this process are collected in a dedicated bag or box, in order to use them again in your Fairmined production circle.
- If the prototypes are not made from Fairmined certified metals, these items can't be marked and claimed as being made of Fairmined metals.
- Clean your tools, your table, and your bench before working with Fairmined metals in order to avoid mixing with non-certified metals.

BEST PRACTICES

- Use certified metal pre-fabricated items (wire, sheet...) to keep the certified metal percentage as high as possible.
- If possible, have designated tools to process Fairmined metals.



ASSEMBLING OF THE PARTS

THE PROCESS

During this process, the different parts of the jewelry item are attached together. Different techniques like sawing, hammering, rolling, flattening and shallowing, welding and soldering can be used to assemble the item. This phase can also include other processes that combine the different elements of the final item, using pliers to attach bails, clasps, earring hooks, stud earrings, jump and split loops, chains, metal tags, locks, headpins, and more. The process might require cutting extra metal parts until reaching the wished appearance. This process can be done in-house or can be outsourced to one or more subcontractor/s.

TRACEABILITY RISKS: HIGH

Some of the assembled findings (like bails, clasps, earring hook...) may not be made of Fairmined certified metals if not available in the market. In this case, the licensed brand must ensure that those findings don't represent more than 15% of the total gold content of the piece.

BEST PRACTICES

- All elements made of gold or silver will be made from Fairmined certified metals. If the findings aren't available in certified metals, maybe hand making them will add more value since the product would be from 100% certified metal.
- Using certified metal sheets and wire to keep the certified metal percentage at 100%.

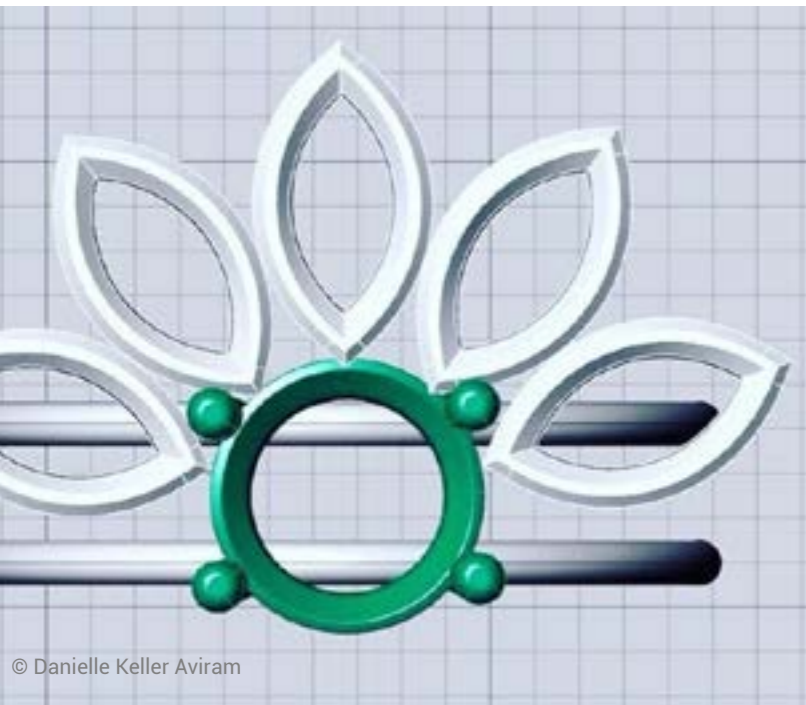
WAX CARVING

THE PROCESS:

The maker carves the shapes and elements that make up the whole item out of a wax block. Wax sheets and wire can be also used to create the desired elements. The elements can be carved together as one piece or in a few different parts. This process can be done in-house or with subcontractors.

TRACEABILITY RISKS: NONE





3D DESIGN, RENDERING & PRINTING

THE PROCESS:

The sketched jewelry item is transformed into a file using a 3D program. At this stage the designer will translate the initial sketch into a 3D object and will even be able to measure the weight of the item and the metal needed. The 3D file is then transferred into a printing format that will be used with a 3D printer. After the printing is done the item can be cast regularly like a wax carved item.

This process can be done in house or it can be done with a subcontractor.

TRACEABILITY RISKS: NONE

DESIGN & QUALITY CONTROL

THE PROCESS:

In this stage, the item is checked to make sure that:

- the product weight is right
- there is a balance of the different elements of the item to avoid it to turn toward an unwanted direction, or that some of the elements or all of them are hidden.
- all the elements are stable and comfortable against the body and skin.
- the hierarchy of the elements in the item are organized and placed in the right form when put on the body.
- make sure there aren't any production failures.

This process is usually done in-house. After the items approval it may pass on to mass production.

TRACEABILITY RISKS: NONE

STEP 2: MASS-PRODUCTION

PREPARING FOR MOLDING & MAKING THE MOLD

THE PROCESS:

In order to make the mold of a piece of jewelry or even just an element, there are a few preparation steps to be done. The item needs to be polished up to a perfect level before the mold making. The surface must be processed to look smoother, using first rougher tools like files in different shapes, then moving to more delicate tools like rubber burs, fabric tools and brushes with designated polishing soap.

The mold is then created based on the polished prototype is being used to create wax duplications of the prototype.

TRACEABILITY RISKS: LOW

If all the manufacturing is done by subcontractors then usually this step would also be done by subcontractors.

BEST PRACTICE

Dedicated tools should be used for polishing items that contain certified metals before molding in order to prevent non-certified Fairmined particles from getting into the refining process of these cleaning tools.



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MAKING THE WAX DUPLICATIONS AND THE TREES

THE PROCESS

Using a wax injector, the mold is filled with hot wax that reproduces the shape of the prototype with an additional branch that will serve to connect the different copies. After all the copies are made, the wax copies are joined in a treelike structure of wax that will be used to cast several pieces at the same time. This process is generally being outsourced, usually to the same subcontractor/s that do the casting.

TRACEABILITY RISKS: NONE

CASTING

THE PROCESS

When the tree of wax is ready, it is surrounded with an iron cylinder with a rubber bottom. Plaster is poured into the cylinder, covering the wax tree. Once dry, the cylinder is inserted into an oven that can reach almost 1000 Celsius degrees. While in the oven, all the carved wax models melt and the plaster reveals the negative spaces of the models. The plaster's unique quality is that it exactly copies even the smallest details of the wax carved models. After a few hours in the oven, each cylinder is taken out of the oven and then put in a centrifugal machine, in which they place on one side the cylinder and on the other side the desired metal. The metal is melted in a ceramic bowl inside the centrifugal machine. Once the metal is completely melted, the metal is poured in the cylinder. After cooling, the cylinder is soaked in water to melt the plaster and what is left is a metal tree with all the models attached to it.

TRACEABILITY RISKS: HIGH

- Nearly all jewelry brands and businesses outsource this process, since it requires special machinery, a big space to operate as well as a ventilation system. Besides, it is more economical to operate the casting machinery if you have many casting items to cast every day.
- The tree and all the branches need to be made from 100% Fairmined gold. The trees and branches can be melted and cast again, but there must be a complete separation of the Fairmined gold and other sources of gold.

BEST PRACTICES:

Preferably there will be a designated ceramic bowl for the centrifugal machine to avoid Fairmined gold to be mixed with gold from other sources.



STEP 3: FINISHING

POLISHING

THE PROCESS:

Polishing is done between almost every step of the jewelry production. In this process, a substance is rubbed on the item's surface. The soap is being used on a cloth or brush to clean the surface and the object as a whole to make it smooth, glossy and shiny. The step is done using a hanged or on-table motor that is then connected to the specific brush. After this process, the item can be cleaned in a tumbling machine or in an ultrasonic machine. Both methods use water and movement to clean and discard any substance or other dirt left on the item/s. This process can be done in house or by subcontractors.

TRACEABILITY RISKS : LOW

BEST PRACTICES:

If the workshop also uses non-Fairmined metals, it should have special, dedicated brushes and cloths to be used on Fairmined items.

Ideally, this could also be done with the tumbling machine and/or ultrasonic machine as these collect metal particles which could be refined.



STONE SETTING

THE PROCESS:

The jewel is processed to perfectly fit the different stones that will be set. In most setting styles, the metal is worked to fit the stone shape and angles. Using pushers and burnishers, the stones are pushed to their place in the setting and the metal prongs or edges are closed on top of the stones to fix them. After the stones are set, the burnisher can highlight and create luster in the edges of the setting.

This process requires a high level of skills. Some luxury brands might do some of the stone settings in-house, mainly for extremely unique pieces with expensive stones that require an exquisite level of craftsmanship.

TRACEABILITY RISKS: LOW

BEST PRACTICES

The stone setter ideally uses special pushers and burnishers for jewelry made with Fairmined metals to prevent non-certified Fairmined particles from getting into the labeled piece. There are usually many small metal particles around the stone setter table.

GOLD PLATING

THE PROCESS:

Usually, this is the last step in the process since it doesn't leave any marks or signs on the surface of the item and doesn't impact and plate already set stones. The jewelry item or items are soaked in a bath using an electric stream depositing a thin layer of gold on the surface of another metal. This process is used either to cover less precious metals with a micron thickness layer or to plate 14k and 18k white gold to reinforce its shine. This process can be done in house or can be outsourced as well.

TRACEABILITY RISKS: HIGH

Although the plating contains a really small amount of gold, the plating solution must be made of 100% Fairmined gold.

HALLMARKING

THE PROCESS:

Fairmined licensed brands can hallmark pieces that comply with the rules of product composition and traceability of the Fairmined Standard. They can use the method that best fits their purpose (laser, punches...).

The Fairmined logos to produce the hallmark can be downloaded [here](#).

Licensed brands are responsible to comply with national labeling requirements and consumer protection laws in the countries where the products are promoted, distributed and sold.

In the UK, for example, Fairmined licensed brands must get in touch with their Assay Office to hallmark their piece with the Fairmined stamp.



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