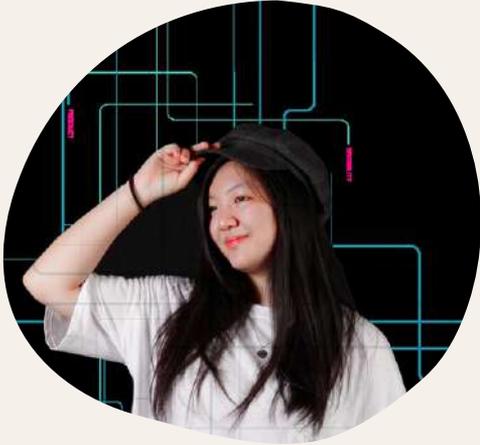


The background features several thin, black, curved lines that sweep across the page, creating a sense of movement and elegance. These lines are positioned around the central text, framing it without enclosing it.

PORTFOLIO

設計是一門藝術與科學的交織，它賦予物品靈魂，將冷硬的材料賦予生命。這是一種對功能美學的追求，以人性化的視角和創新的技術，讓日常物品不僅實用，更富有詩意和生命力。



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Education



Shih Chien University, Taiwan
Major: Industrial Design

Skill

2D



Adobe Illustrator



Adobe Photoshop



Adobe Indesign



Spark AR Studio



Procreate



Python

3D



Rhinoceros 3D



PTC Creo Parametric



Zbrush core mini



Alias Auto Studio



Fusion 360



Shapr 3D



生理布清洗器

在難民營，女生的生理期往往面臨諸多困難。衛生巾等基本生理用品的缺乏，導致她們不得不使用不衛生的替代品，增加感染風險。缺乏隱私和安全的環境，使她們在生理期感到羞辱和不安。這些困境不僅影響她們的健康，也對心理和日常生活造成嚴重影響。

In refugee camps, girls often face many difficulties during their menstrual periods. The lack of basic sanitary products such as sanitary napkins forces them to use unhygienic alternatives, increasing the risk of infection. The lack of privacy and safe environment makes them feel humiliated and uncomfortable during their menstrual periods. These difficulties not only affect their health, but also have a serious impact on their psychology and daily life.





OBJECTIVE & RESEARCH

長期的滯留讓收留國社會壓力沉重，物資逐漸缺乏減少，集中的水源是造成女性最直接面對、也最常在討論中被忽略的問題——經期與衛生。

The long-term detention has put a heavy pressure on the host country's society, and supplies have gradually dwindled. The concentrated water source has caused the issues that women most directly face and are often ignored in discussions - menstruation and hygiene.



隱私
在教育相對落後的地區，經血常被視為不潔，造成女性月經羞恥和排斥。

安全
難民營中，女生去公共洗衣場或供水區的路上，安全無法被保障。

經濟
女生每經期需要用掉30~40片的拋棄式衛生棉，保護其不會受感染。

環保
研究顯示，每片拋棄式衛生棉內的物質，需要500年才能被分解。

現階段 (缺乏標準方法評估)

人道主義組織會確保水、基本衛生設施和住所的供應。

是否對一個家庭只發放了一套用品？

這些用品夠家庭裏所有生育年齡的女性用嗎？

公共廁所建造在女性可以安全使用的位置嗎？

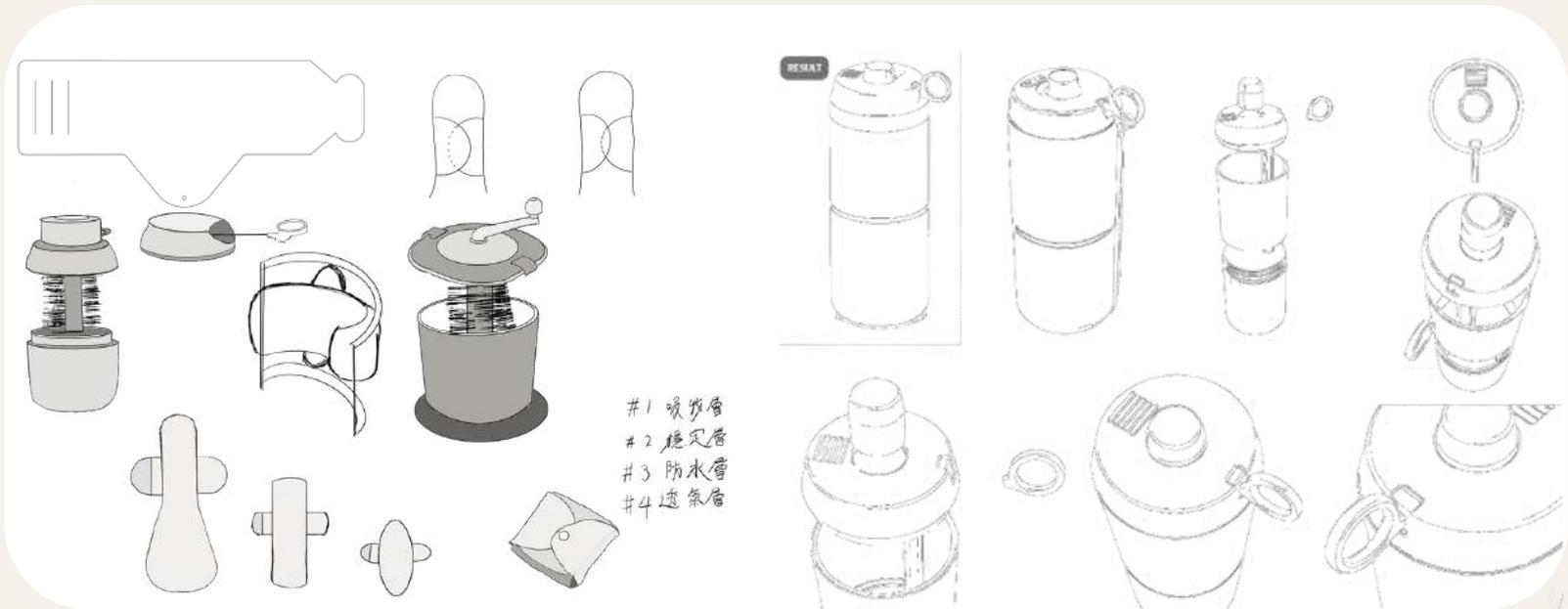
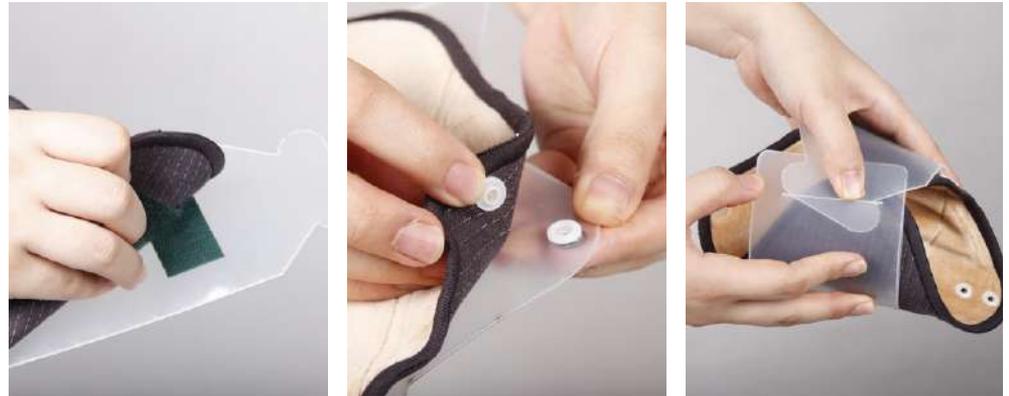
有水供女性清洗月經污漬而免於尷尬嗎？

STUDY MODEL

布料與置具的位置：
不織布固定橫向月經布。

首尾相扣，讓布料呈現環形：
壓克力暗扣來固定縱向的月經布。

裝入清洗桶中：
PP板首尾相扣，使月經布呈現圓筒狀，方便放入清洗器中。

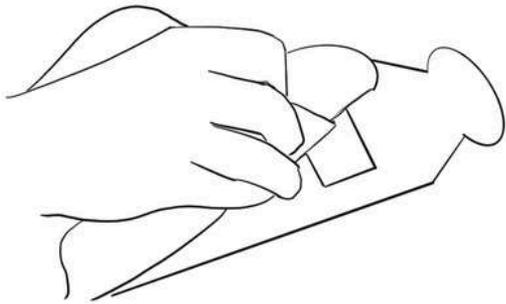


設計的造型概念以單人操作的大小為標準，並簡化操作步驟。使用專門的置具來放置和固定棉布，確保在轉動刷子時棉布不會隨之一起旋轉。這不僅提高了使用的便捷性，也確保了清潔效果。

The modeling concept is in a size that can be operated by one person, and the operation steps are simplified. A device is used to place and fix the cotton cloth so that it will not rotate when the brush is turned. and tactile experience.

HOW TO USE

沾黏



將布料首尾，透過不織布黏在PP版上，能固定在桶壁上。

Glue the end and end of the fabric to the PP plate through the non-woven fabric and fix it to the barrel wall.

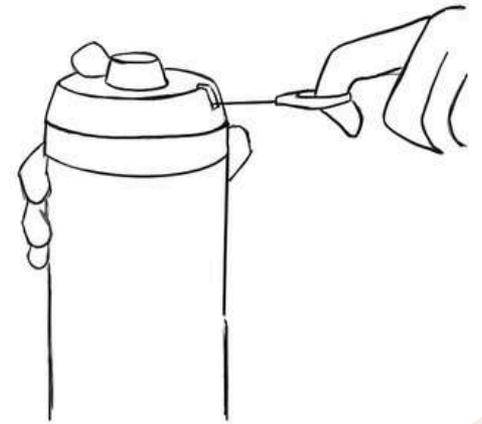
固定



協助使用者用PP版將布料捲成圓形，能置於桶子中。

Help the user roll the fabric into a round shape using a PP plate, which can be placed in a bucket.

清洗



拉動上方的拉環，帶動桶中長刷進行旋轉，來達到清洗的效果。

Pull the top pull ring to drive the long brush in the bucket to rotate to achieve the cleaning effect.

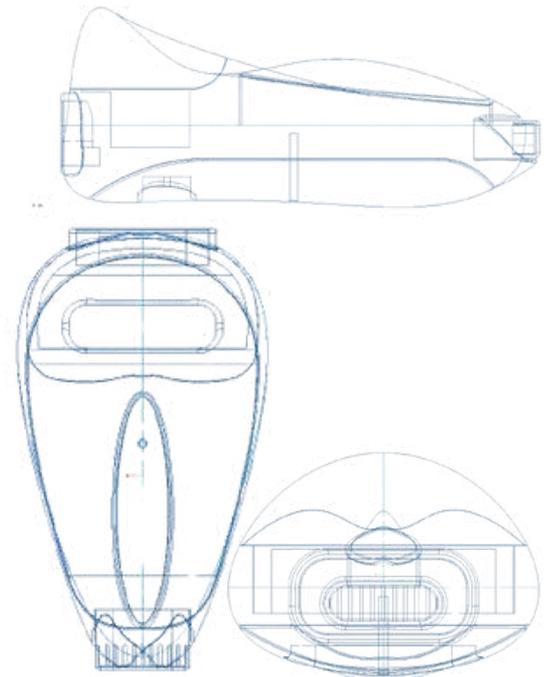


SEESCAN

海洋垃圾清掃機

以漁港來說，環境是屬於半開放式水域，海漂至漁港範圍的垃圾除了成分複雜，兩組機器一個單位，將海面上的垃圾進行清掃，蒐集至圈網中，以無人機的模式進行，達到節約人力資源的目的。

The environment of the fishing port is a semi-open water area. The garbage floating in the fishing port is composed of various complex materials. To address this, two sets of machines per unit are used to clean the sea surface. These machines collect the garbage into a circular net and employ drone technology to transport the waste, thereby saving human resources.





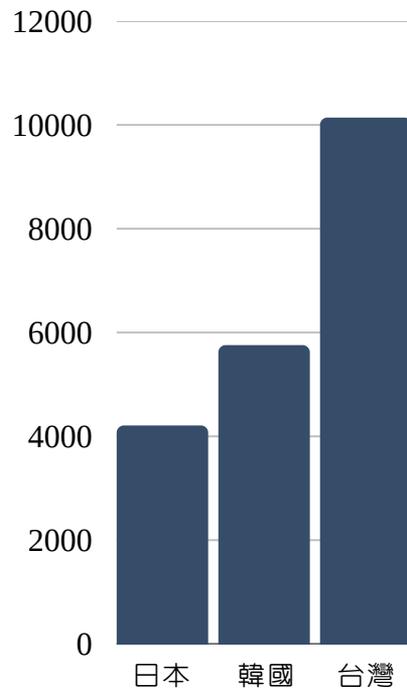
SEESCAN

SEESCAN

OBJECTIVE & RESEARCH

漁港垃圾問題對海洋生態系統和沿海社區造成重大影響，不僅危害海洋生物，破壞棲息地，還導致漁業損失和旅遊業受損。目前是組織志願者和社區參與清理海灘和海洋垃圾，需要大量人力和資金。

Port debris from fishing activities, ship debris and land-based pollution harms marine life, ecosystems, fisheries and tourism. It requires significant resources and does not address the waste problem at its source. Practical and regulatory measures are critical to effectively mitigate these environmental impacts.



日本、韓國、臺灣的海岸線平均每公里的海廢體積。

污染

- 海洋環境受影響
- 生態平衡受威脅
- 海洋生物受傷害

垃圾處理

- 垃圾分類
- 定期清理
- 環保意識提升

政府監管

- 制定管理政策
- 加強執行力度
- 罰則與懲處

流線型
能進入船隻間進行清掃。

分析
制定長期環境保護策略。

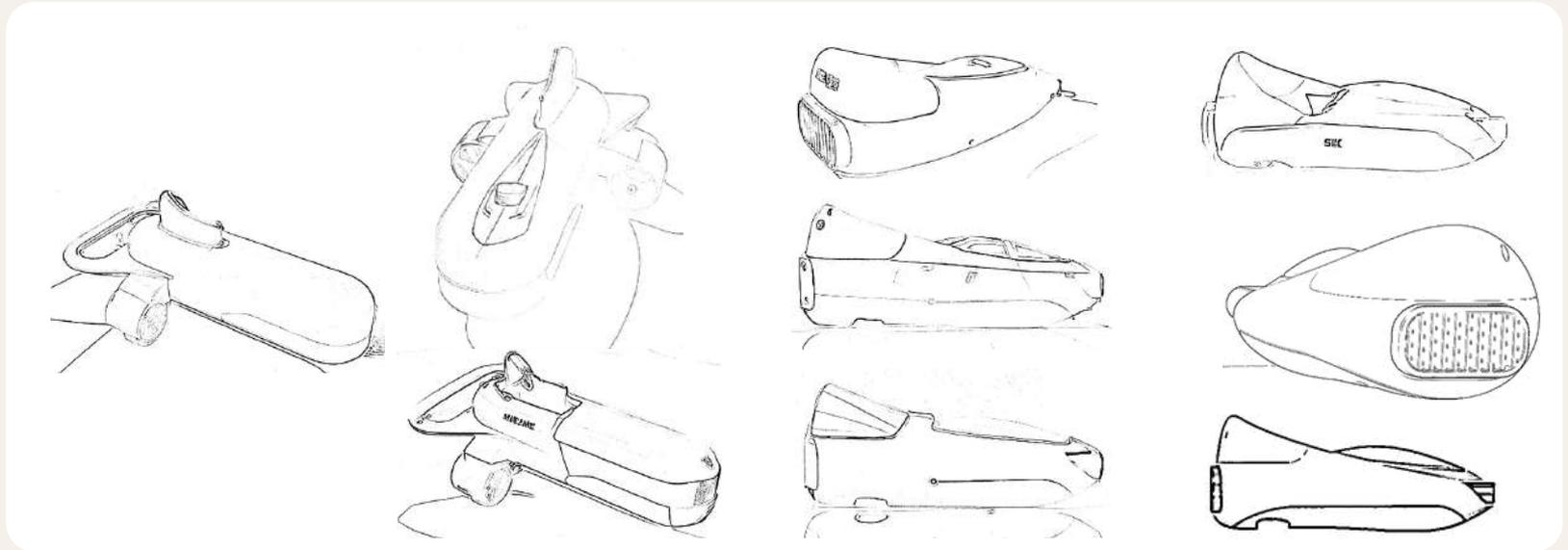
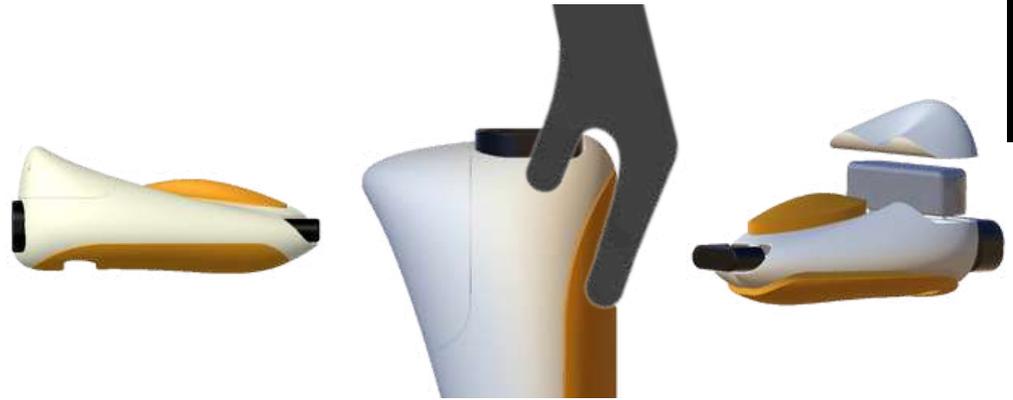
無人機
可以快速覆蓋大面積區域。

STUDY MODEL

兩組機器一個單位擴大清掃範圍。

內裝精簡輕量，後方做拿取，配電池盒做更換。

透過白色和橙色搭配，在運行時容易被觀測到。

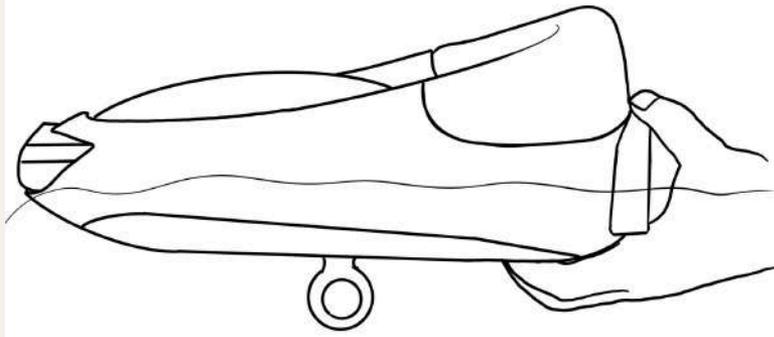


採用流線型外殼和凸起設計，以減少水阻並提升水動力效率。選用耐鹽腐蝕材料和結構，能有效應對海洋環境中的高鹽度和潮濕條件，延長產品壽命並減少維護成本。

Streamlined shell and convex design to reduce water resistance and improve hydrodynamic efficiency. The selection of salt corrosion-resistant materials and structures can effectively cope with high salinity and humid conditions in marine environments, extend product life and reduce maintenance costs.

HOW TO USE

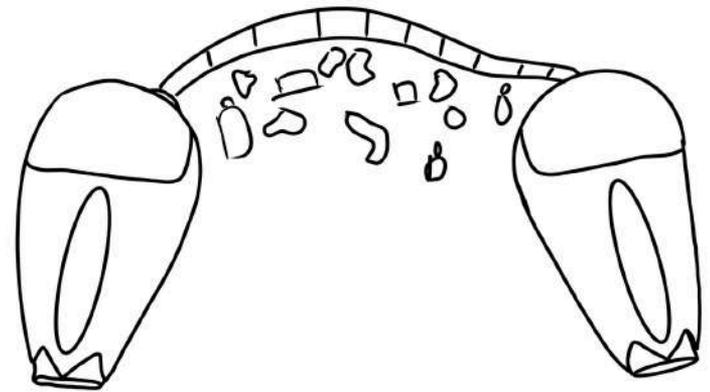
連線放置



無人機放置於水面後，隨即啟動聯結機器的程序。系統開起確保所有功能能夠適應水上環境並正常運行，這樣的操作確保了無人機的高效和穩定運行。

After the drone is placed on the water, the process of connecting to the machine is immediately started. The system is turned on to ensure that all functions can adapt to the water environment and operate normally. This operation ensures the efficient and stable operation of the drone.

大範圍清掃



無人機下方裝置掛有可伸縮的網具，能根據清掃範圍自動調整長度，實現大範圍海面清潔。這一設計能夠有效清理水面垃圾，提高清潔效率，保障海洋環境健康。

A retractable net is hung on the lower device, which can automatically adjust the length according to the cleaning range to achieve large-scale sea surface cleaning. Effectively clean up garbage on the water surface, improve cleaning efficiency, and ensure the health of the marine environment.



Frax

VASE

材料是紅銅和黃銅運用不同金屬的顏色差異，凸顯出焊道的部分。焊接原來的效果是將兩片金屬做接合，從底部焊接的部由下市上做出開放的姿態。銅片彎折成為兩個半弧形，利用焊接使其合二為一，使片狀的鐵片成為立體圓柱。將一件作品打磨，可以對比銅氧化前後，不同的質感。

The material is red copper and brass using the color difference of different metals to highlight the part of the weld bead. The original effect of welding is to join two pieces of metal, and the part welded from the bottom makes an open posture from the bottom to the top. The copper sheet is bent into two semi-arc shapes, and welded to make the two into one, so that the sheet-shaped iron sheet becomes a three-dimensional cylinder. Polishing a piece of work can compare the different textures of copper before and after oxidation.

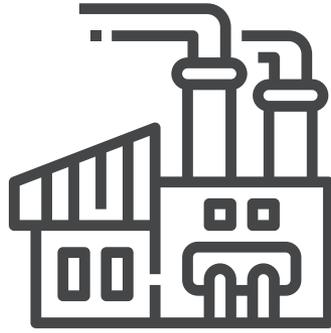
TA
Adult

CATGORY
Home decor product

SCALE
150*150*200mm

MATERIALS
Red copper/brass

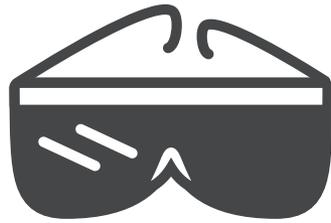




進入工廠



調查參訪



實驗

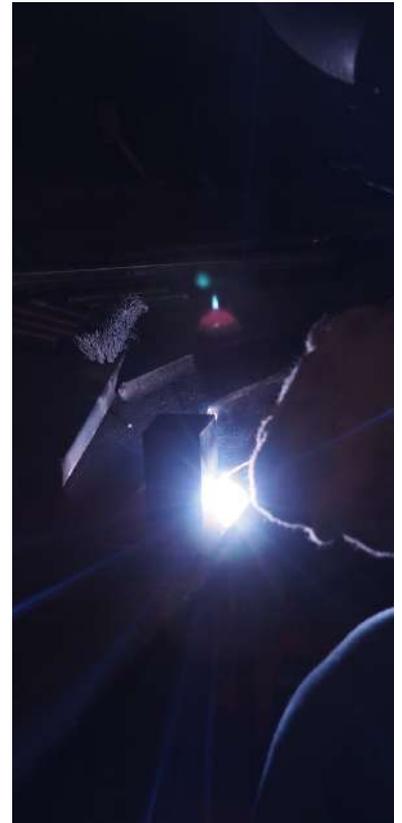


與設計結合

MANUFACTURING PROCESS

加熱欲接合之工件使之局部熔化形成熔池，熔池冷卻凝固後便接合，必要時可加入熔填物輔助，借焊料的毛細作用連接工件，使兩工件間相互滲透接合。進行焊接時必須採取適當的防護措施，否則可能造成的傷害包括燒傷、觸電、視力損害等。

The workpieces to be joined are heated to partially melt to form a molten pool, and then joined after the molten pool is cooled and solidified. If necessary, fillers can be added to assist, and the workpieces are connected by the capillary action of the solder, so that the two workpieces can penetrate and join each other. Proper protective measures must be taken when welding, otherwise the possible injuries include burns, electric shock, visual impairment, etc.



DETAIL

四片彎曲角度是R10，另外兩片用手彎曲使角度更大，讓它具方向性。

The bending angle of four pieces is R10, and the other two pieces are bent by hand to make the angle larger, so that it is directional.



將其表面做拋光處理，可以更加直觀的對比出顏色變化。

Polishing the surface can make the color change more intuitive.

焊接後不只有焊道，還會和周圍金屬融合使顏色向外暈開。

The surrounding metal fusion allows the color to be metered out.



Frax

BAG

在使用購物袋時，面臨空間不足，造成需要購買塑膠袋的情況，出門時想要帶著優雅的小包包，但是因為空間問題，而塞不下一隻唇膏，若是袋子過大，會造成佔用空間；若是袋子過小，會造成使用空間不足的問題。此產品是一片為一個單位，靠著螺絲與螺帽組裝起來，可以自由地組裝成想要的樣式，也可以依據片數的多寡來增減空間。

When using shopping bags, facing the lack of space, you need to buy plastic bags. When you go out, you want to carry an elegant small bag, but because of the space problem, you can't fit a lipstick. If the bag is too big, it will take up space; If the bag is too small, it will cause the problem of insufficient space. This product is a unit, which is assembled by screws and nuts. It can be freely assembled into the desired style, and the space can also be increased or decreased according to the number of pieces.

TA
Adult

CATEGORY
Insufficient bag space

SCALE
400*200*300mm

MATERIALS
PP/Nut/Screw

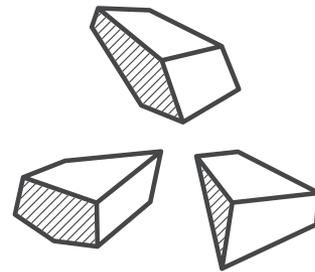




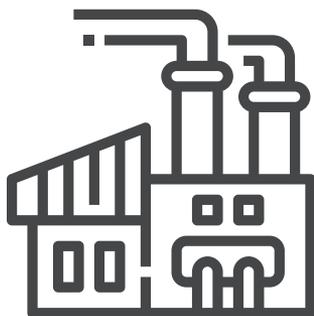
結構研究



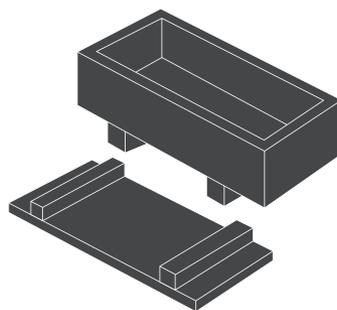
與設計結合



材料選擇



進入工廠



模具製作

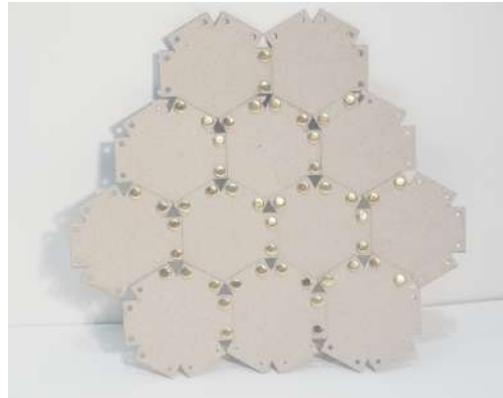
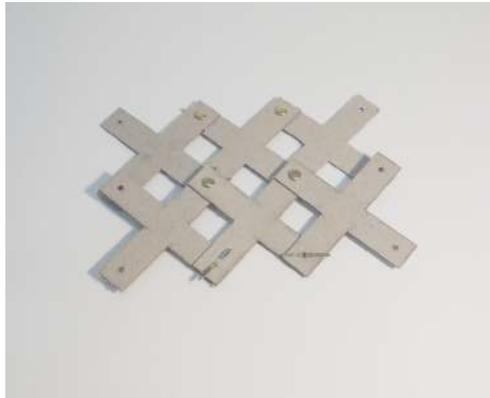
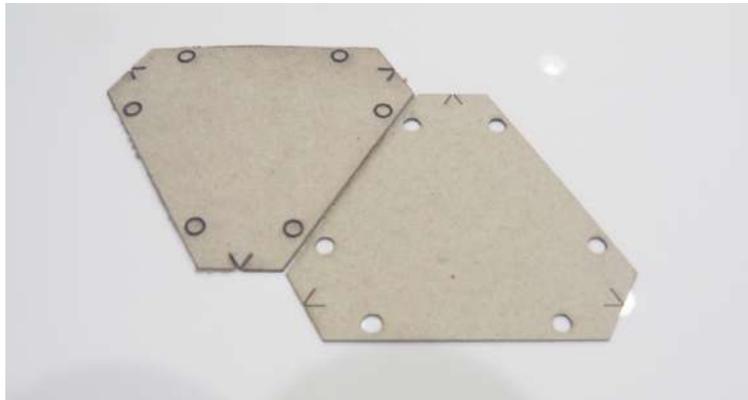
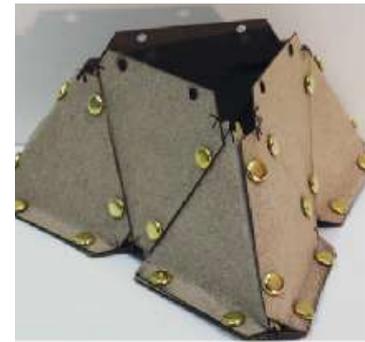
DESIGN DEVELOPMENT

產品是一片為一個單位，用螺絲與螺帽組裝起來，不怕袋子有刮痕或是損壞，因為每一片結構都能拆下替換的，可以自由地組裝，每一個零件有四個連接點牢固，可以根據片數的多寡來增減使用空間，不會為空間的大小煩惱。

The product is a piece as a unit, assembled with screws and nuts, not afraid of scratches or damage to the bag, because each piece of structure can be disassembled and replaced, and can be assembled freely. Each part has four connecting points for firmness, you can increase or decrease the use of space according to the number of pieces, without worrying about the size of the space.

嘗試過的其他結構。

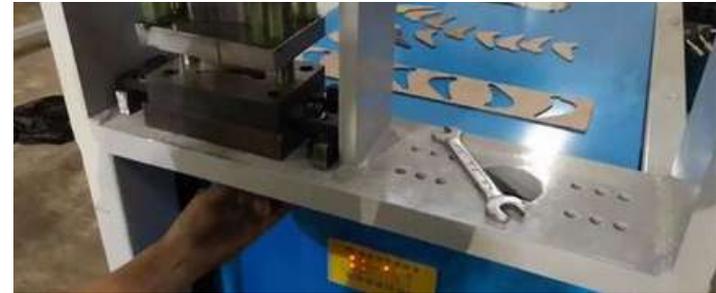
Other structures tried.



EXPERIMENT

衝壓是一種冷衝壓加工方式，係藉助於標準或專用衝壓設備的動力重擊材料（金屬或非金屬），將其裁切、折彎或塑造成模具所規範的成品形狀與尺寸中。衝壓加工大致可區分成剪切、彎曲、成型及引申等幾種不同的加工型式。

Stamping is a kind of cold stamping processing method, which cuts, bends or molds the material (metal or non-metal) into the finished shape and size specified by the mold by means of the power of standard or special stamping equipment. Stamping processing can be roughly divided into several different processing types such as shearing, bending, forming and extension.



SCENARIO

拿取適量的零件與螺絲螺母。
Take the right amount of parts and screws and nuts.



將每一片零件用螺絲與螺母固定。
Fasten each piece with screws and nuts.

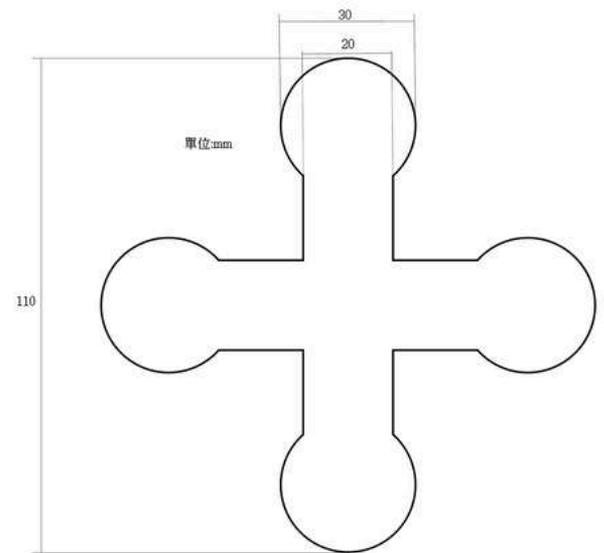


組合符合需求大小得包包。
Combine bags that meet your needs.



每片零件都有四個結構點，整體受力平均，承重力增加，可拆式固定可以根據需求進行增減。

Each part has four structural points, the overall force is evenly distributed, the load-bearing capacity is increased, and the detachable fixation can be increased or decreased according to needs.



F-ralix

調香輔助機

透過機器紀錄配方，提高配方準確性，減少人為疏失，同時防止細菌和積聚的精油殘留，擁有不同的時間和強度設定，可以根據需要進行調整。紀錄每一次的改變和結果，為創新開發香水提供更多參考數據。

The machine records the formula to improve formula accuracy, reduce human errors, and prevent bacteria and accumulated essential oil residues. It has different time and intensity settings and can be adjusted as needed. Record every change and result to provide more reference data for innovative perfume development.

調香師職業介紹 INTRODUCTION

調香師通常負責創造和製作香水、精油、香薰產品等香氣產品，專業人士通常擁有深厚的香料知識、嗅覺敏感度和藝術創造力。調香師不僅需要具備香料知識，還需要熟練掌握香水的製作技術，包括

Perfumers are typically responsible for creating and crafting scented products such as perfumes, essential oils, and aromatherapy products. Professionals typically possess in-depth fragrance knowledge, olfactory sensitivity, and artistic creativity. Perfumers not only need to have knowledge of fragrances, but also need to be proficient in perfume-making techniques, including concentration, mixing and dilution.



DESIGNER

劉詹愛琳 CHAN AI LIN-LIOU

TA

Perfumer

CATEGORY

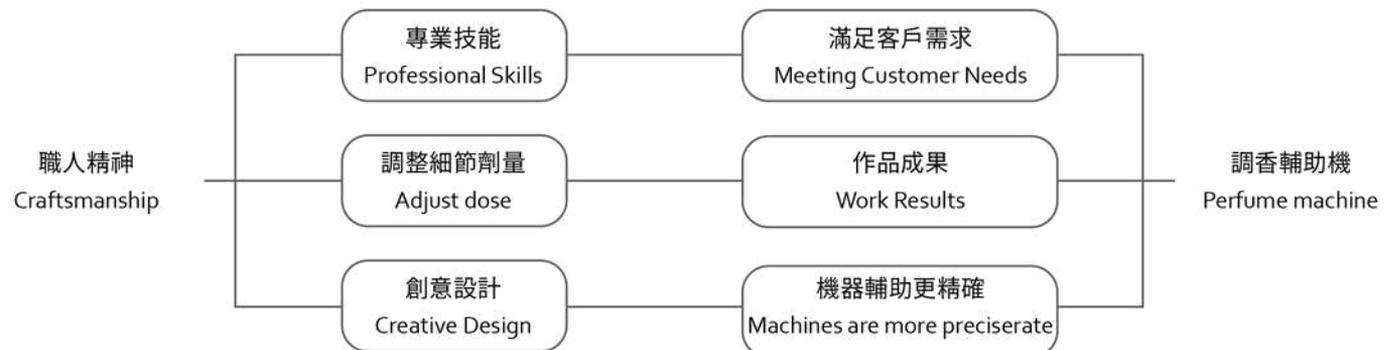
Toolkit

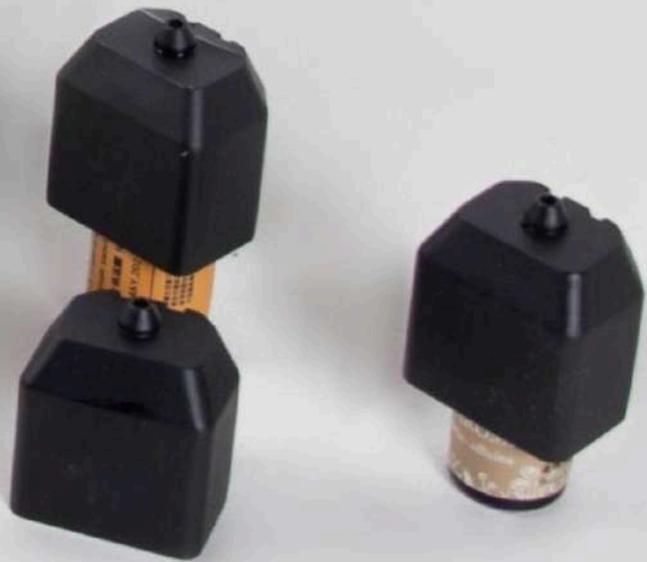
DIMENSIONS

250*250*200

MATERIALS

ABS\Plastic





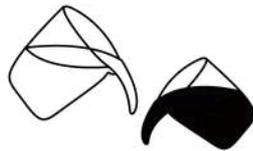
調香製作過程 PROCESS

步驟 Step	選擇香料 Choose	天然和合成香料，通常會結合兩者獲得所需香氣。	Divided into natural and synthetic fragrances, the aroma is obtained by combining the two.
	分類香料 Assort	精油會被分為前調、中調和後調。	Spices are divided into top notes, middle notes and back notes.
	建立配方 Establish	確定每種香料的比例和混合方式。	Determine the proportions of each spice and how to mix them.
	混合香料 Mix	需要仔細計量和混合，以確保香水的均衡和一致性。	Carefully measure and mix to ensure a balanced fragrance.

製作過程 Process



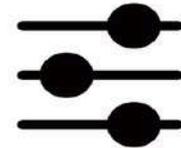
挑選香料
Pick



製作基底
Make base



混合香料
Mix



修正調整
Adjustment

設計背景 DESIGN BACKGROUND



機器紀錄配方，提高配方準確性。紀錄每一次的改變和結果，為創新開發香水提供更多參考數據。
Machine recording to improve accuracy. Record changes and results to provide more reference data for innovative perfume development.

設計目標 DESIGN OBJECTIVE

簡化製作過程
Simplify the process

精準配方
Precise formula

通用市面上瓶裝精油
General market

機器紀錄
Machine records

用機器紀錄香水配方，減少了人工操作，提高生產效率。機器紀錄，可以輕鬆更換成分、調整配方，進行實時調整。使用者可以根據自己的喜好調整配方，透過機器紀錄，實現個性化定制。
Reduce manual operations, improve production efficiency, replace ingredients, adjust formulas, and make real-time adjustments. Users can adjust the formula according to their own preferences and achieve personalized customization through machine recording.

使用流程 PROCESS



機器控制噴頭的出精油量

The machine controls the water output of the nozzle.

可與市面上大部分瓶子進行組裝

Can be assembled with most bottles on the market

可調整紀錄細微變化的參數

Adjustable parameters that record subtle changes.

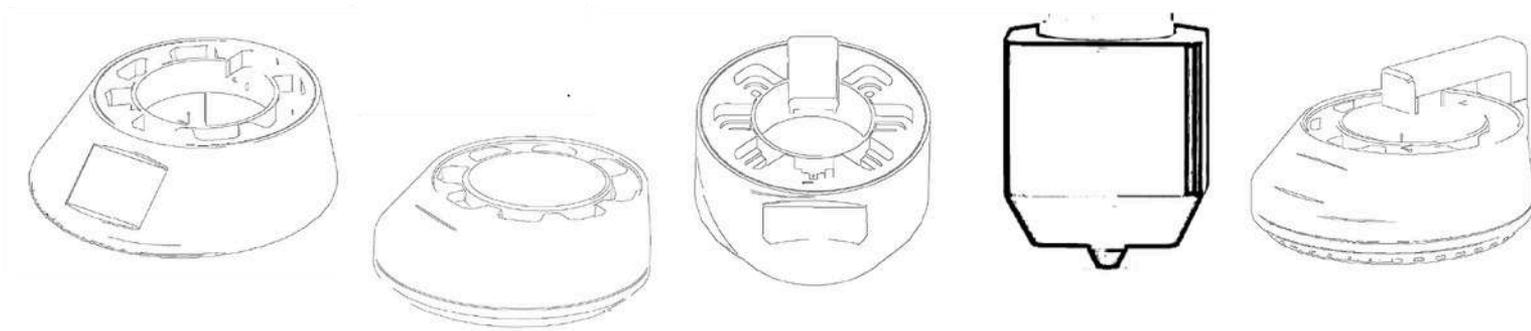
內裝運輸盤放置量杯

Pick gel colors and decorations, place in spill-proof tray.

透明罩隔絕外在塵屑

Transparent cover blocks external dust and debris.

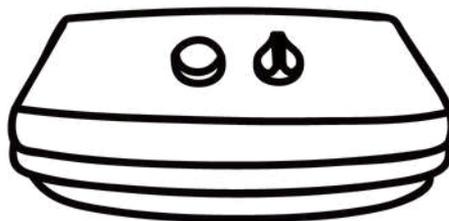
草圖 CONCEPT SKETCH



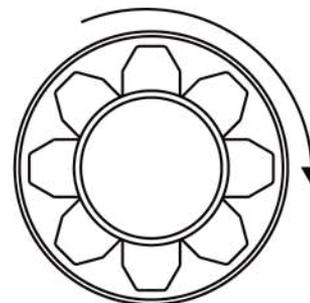
使用方法 HOW TO USE



將精油裝置在機器上
Install essential oils on the machine.

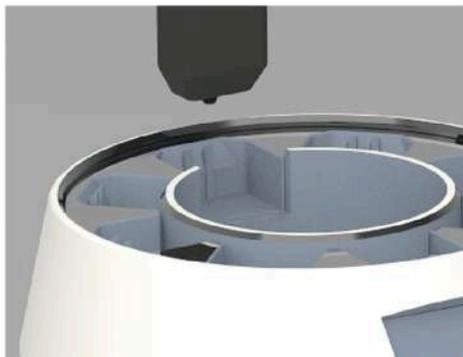


調整參數
Adjustment parameters.



機器運作
Machine operation.

使用情境 SCENARIO



設計細節 DESIGN DETAILS



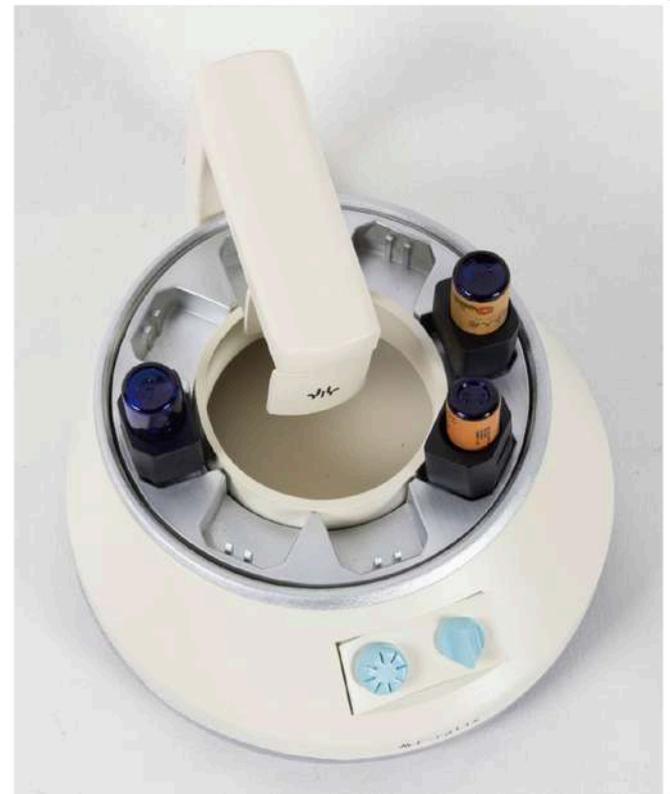
適用於市面上絕大多數得精油瓶尺寸。
Suitable for oil bottle sizes on the market.



圓形轉盤操控。
Circular turntable control.



將噴頭固定於卡座中。
Fix the nozzle in the card holder.



F-ralix

增肌減脂餐盒

那些希望透過運動和訓練改善體態，增加肌肉質量，同時減少體脂的人，適當的飲食、訓練和休息是實現目標的關鍵。這組餐盒能夠幫助在增肌減脂的族群，更好的抓取在不同時期下，需要的碳水化合物、蛋白質、脂肪的正確配比。

For those who wish to improve their posture, increase muscle mass, and reduce body fat through exercise and training, proper diet, training, and rest are keys to achieving their goals. This set of meal boxes can help people who are building muscle and losing fat to better capture the correct ratio of carbohydrates, proteins, and fats they need at different times.

增肌減脂的目的 PURPOSE

透過增加肌肉質量和同時減少體脂，可以塑造更為線條分明、結實的身體外觀，提高整體身形比例。提高基礎代謝率，使得身體在休息狀態下也能消耗更多能量，促進整體健康適度的肌肉量和較低的體脂率與心血管健康、骨骼健康以及代謝健康相關聯。

Increasing muscle mass while simultaneously reducing body fat creates a more defined, toned appearance and improves overall body proportions. Increasing the basal metabolic rate allows the body to burn more energy at rest, promoting overall health. Moderate muscle mass and lower body fat are associated with cardiovascular health, bone health, and metabolic health.



DESIGNER

劉詹愛琳 CHAN AI LIN-LIOU

TA

Fitness Crowd

CATEGORY

Lunch Box

DIMENSIONS

200*200*250mm

MATERIALS

Plastics / Stainless steel



碳水化合物

Carbohydrate

是身體主要的能量來源

Is the body's main source of energy

能量

Energy

蛋白質

Protein

構建和修復組織

Build and repair organizations

配比

Proportion

脂肪

Lipids

最高效的能量儲備形式

The most efficient form of energy



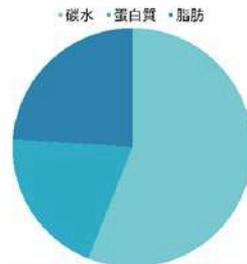
不同時期的飲食 DIFFERENT

不同時期
Different times

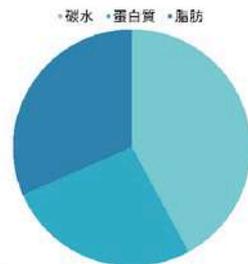
增肌階段 Bulk	增加總能量攝取，特別是蛋白質和碳水化合物。	Increase total energy intake, especially protein and carbohydrates.
減肥階段 Cut	控制攝取碳水化合物的，以促進脂肪的代謝。	Control your intake of carbohydrates to promote fat metabolism.
維持階段 Maintenance	調整能量攝取使其平衡，以防止體重的極端波動。	Adjust your energy intake to balance it to prevent extreme swings in weight.
重啟階段 Recomp	控制總能量攝取，特別是維持蛋白質攝取。	Control total energy intake, especially maintain protein intake.

能量配比

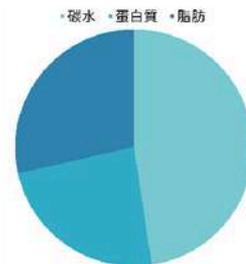
Proportion



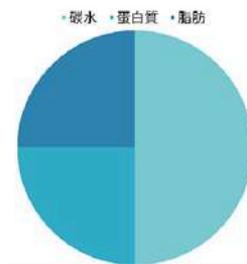
增肌階段
Bulk



減肥階段
Cut



維持階段
Maintenance



重啟階段
Recomp

設計背景 DESIGN BACKGROUND



對於上班得外食族很難吃到符合增肌減脂，營養均衡的三餐，故將便當做合理的空間規劃，知道所需的各能量比。

Eating out eats three meals that are nutritionally balanced, plans the convenience area accordingly, and knows the energy ratio required.

設計目標 DESIGN OBJECTIVE

能量比重
Energy specific gravity

空間規劃
Spatial Planning

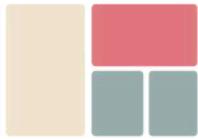
儀式感
Sense of ritual

加溫加熱
Heating

在產品中設計加熱功能，打破一般餐盒只能吃加熱食品的概念，加入儀式感，能體驗剛出爐的美味，也能簡單計算各能量比重。

The heating function adds a sense of ritual, allowing you to experience the freshly baked deliciousness and easily calculate the energy proportions.

使用流程 PROCESS



空間規劃
Spatial Planning



營養計算
Calculations



調整
Adjustment



Type C
Type C



加熱
Incense Extruder



手持
Incense Burner

規劃食物用空間
Planning space for food

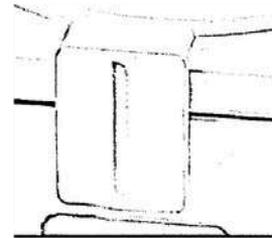
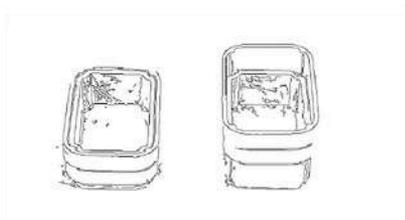
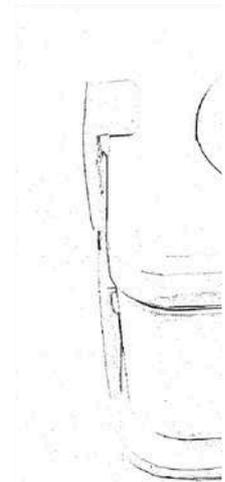
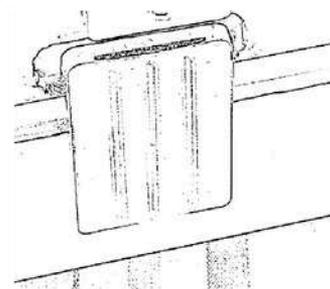
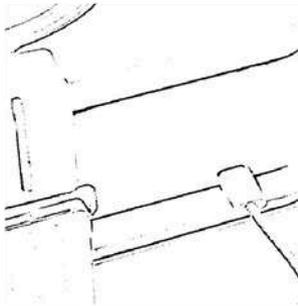
不同時期不同營養
Different nutrition at different times

使用充電器進行加熱
Use charger for heating

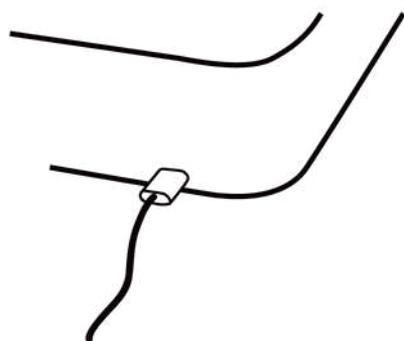
加熱使其擁有儀式感
Heating gives it a ceremonial feel

手持設計能不占用上班空間
Handheld design does not take up work space

草圖 CONCEPT SKETCH



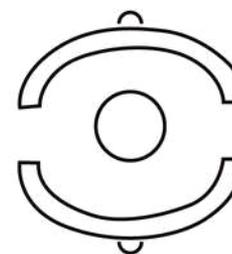
使用方法 HOW TO USE



充電加熱
Charging and heating



卡扣設計
Buckle design



提把設計
Handle design

使用情境 SCENARIO



設計細節 DESIGN DETAILS



兩組磁吸卡扣，讓移動過程中更加牢固。
Two sets of magnetic buckles.



充電器加熱，能迅速開始加熱。
Charger heats up quickly.



共 6 種方格大小能夠增加配餐自由度。
6 square sizes.

