

Training at Ticket Design, Pune.

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Product Design

IDC



TICKET DESIGN is a multidisciplinary design group offering a cohesive and seamless approach to Product Design and Development with Industrial design as the core offering.

It is a privately held firm based in Pune founded by Graduates from National Institute of Design (NID) Ahmedabad in 2000

Their services include:

Product Design, Application Development, Design adaptations to match the market feedback, Systems Design, Applied ergonomics and interface design, Product accessories, Retail display Packaging, Technical illustrations, POP packages, Product graphics.



Balkrishna Mahajan and Nishma Pandit

(co – founders)

Design Specialist

Trainee designers

Design Engineers

Model maker



Design Process followed by Ticket design:

-Research

User and Scenario definitions.

Understanding the market, the need and the user.

Study of the product and its functioning.

Developing flow charts to illustrate typical usage.

-Concept design

Generating concepts for the product/system, through exploration of form, function, color schemes, ergonomics, alternate use and materials

-Design Development

Selected concept is detailed for manufacturing. The output is in the form of a 3D model and Orthographic technical drawings

-Prototype development

Prototype development provides an insight into the design as represented in the physical form closest possible and working

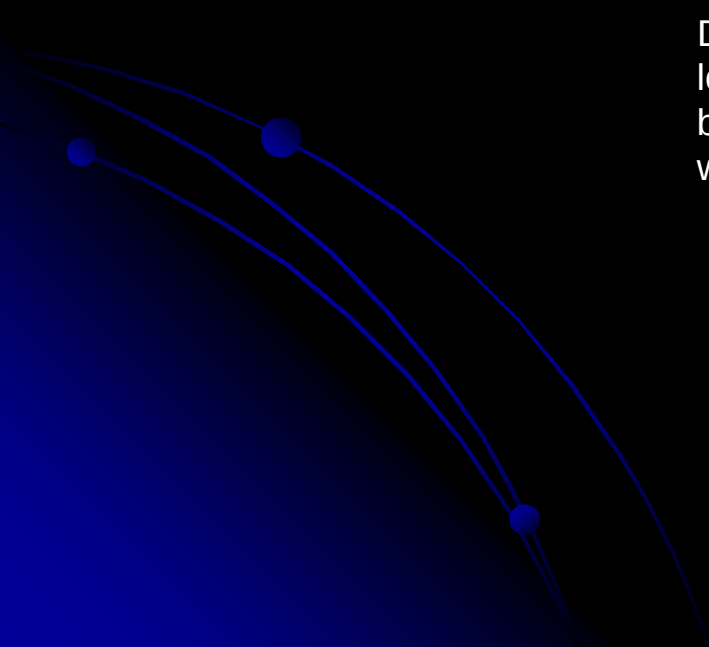
– Redesign of Water Cooler

1. Problem statement from the client

Need to improve the sales, improve the image of existing product which is known for just its reliability and to capture the market share of competitor products.

2. Design Brief

Design a cooler that would make the user display it at prominent location (especially in places like malls and software offices) and bring certain features to improve its performance that goes along with the reliability image of the product.



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3. User study

Study was carried out in restaurants, offices, shopping complex and institutes.

Some of the observations were as follows: (partial list)

- There is no temperature setting/control/indicator.
- Water temperature is checked by touching its container.
- There is no check for efficiency.
- Serviced regularly after every 3 months by service engineer.
- Cleaning the tank is done every week
- Cooling time required is 10 minutes – 3 hrs.



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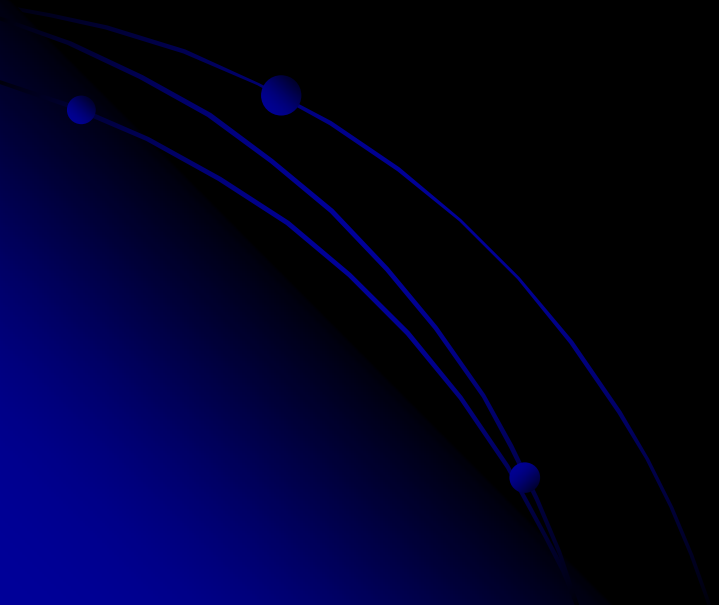
4. Data collection on existing products



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5. Understanding product architecture

Basic engineering aspects such as the working, the hard points of the internal assembly and the assembly of the existing product was studied.



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6. Study of Steel products available in market

Stainless Steel products from Jindal steel



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6. Study of Steel products available in market

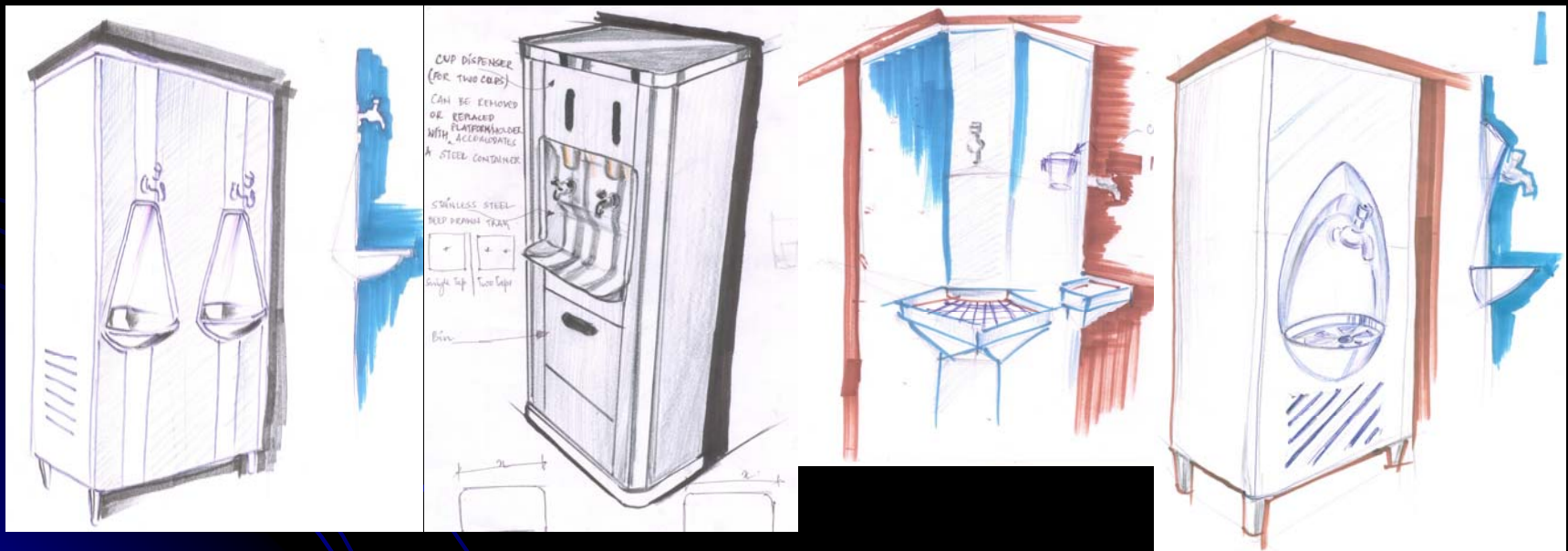
Products from D'line in steel



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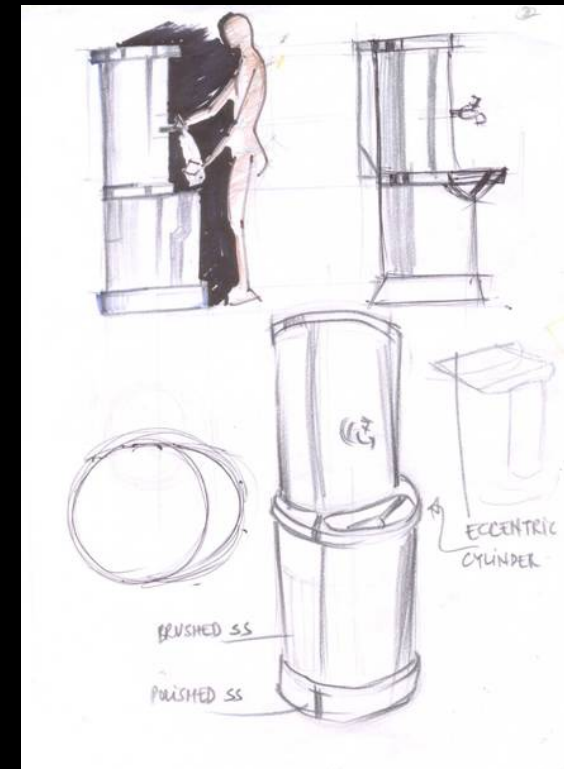
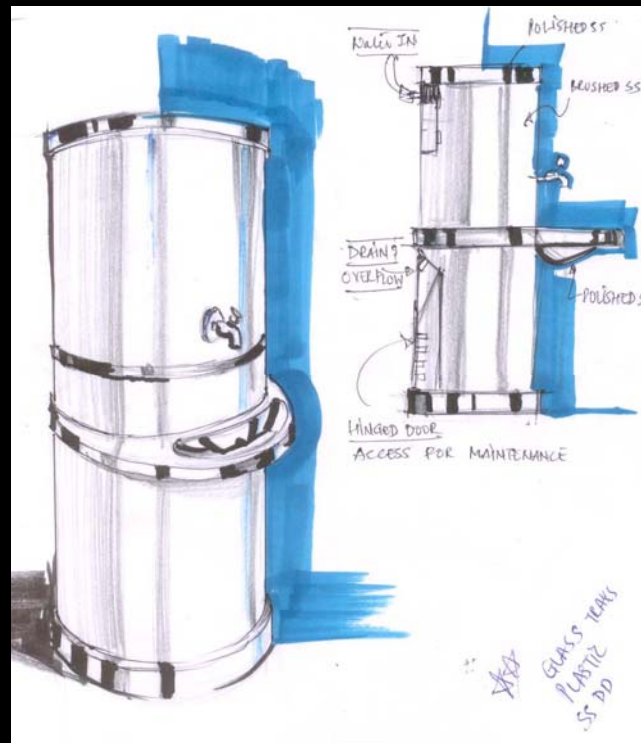
7. Idea Sketching

In this stage, number of free hand sketches was drawn and rendered. Different ideas were generated such as possibility of using different combination of materials, concept of replaceable trays, Modular concepts of the facet, deep drawn modular trays, use of cup dispensers etc.



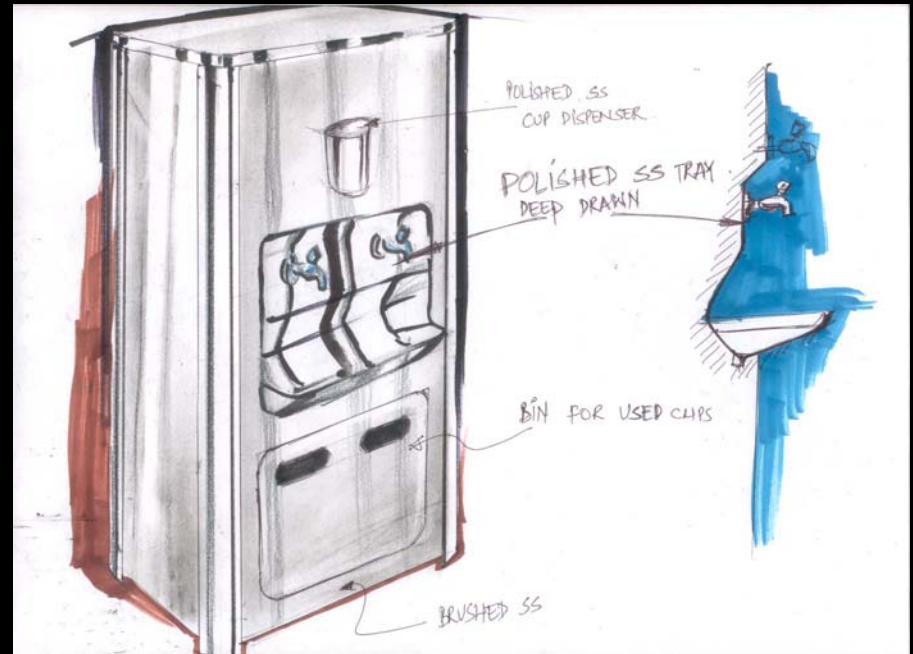
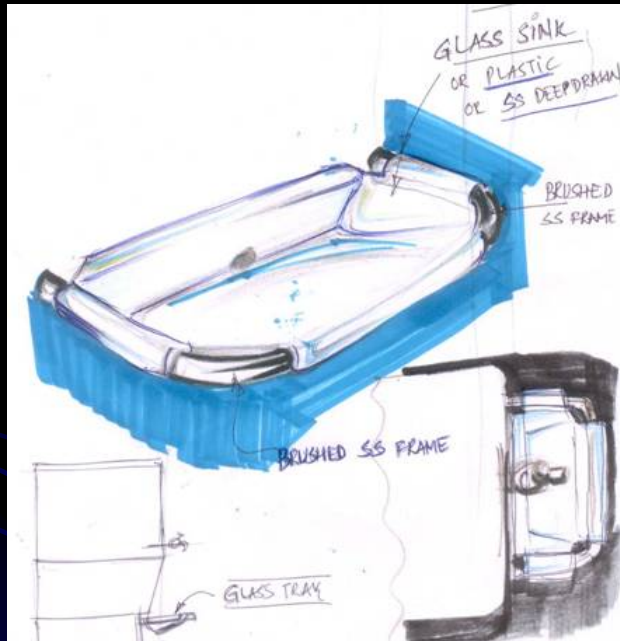
Project

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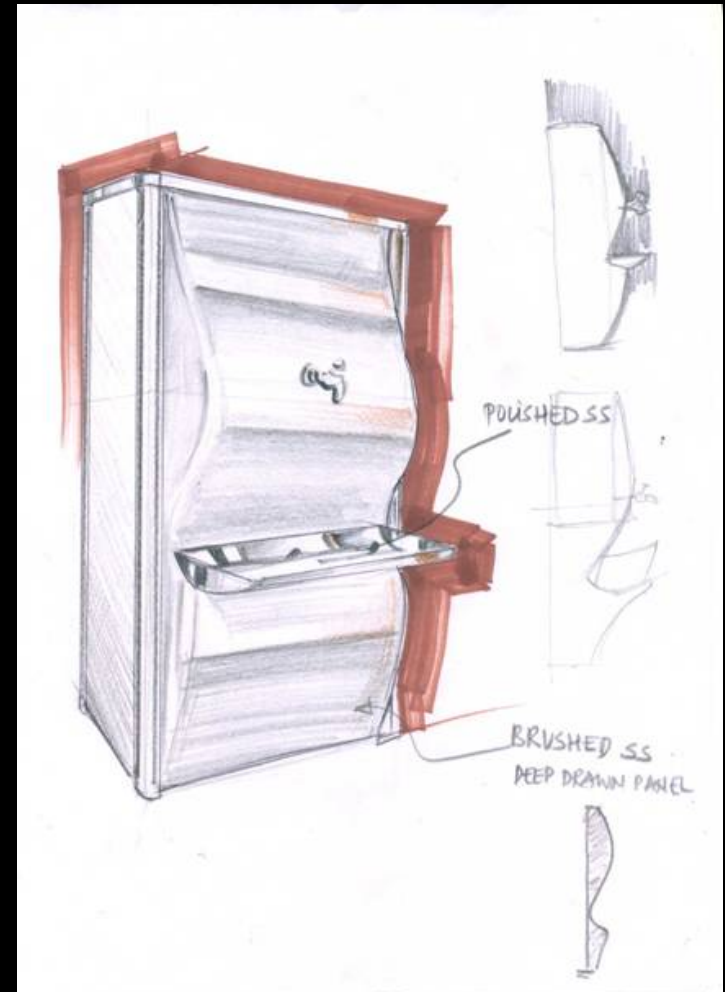


Project

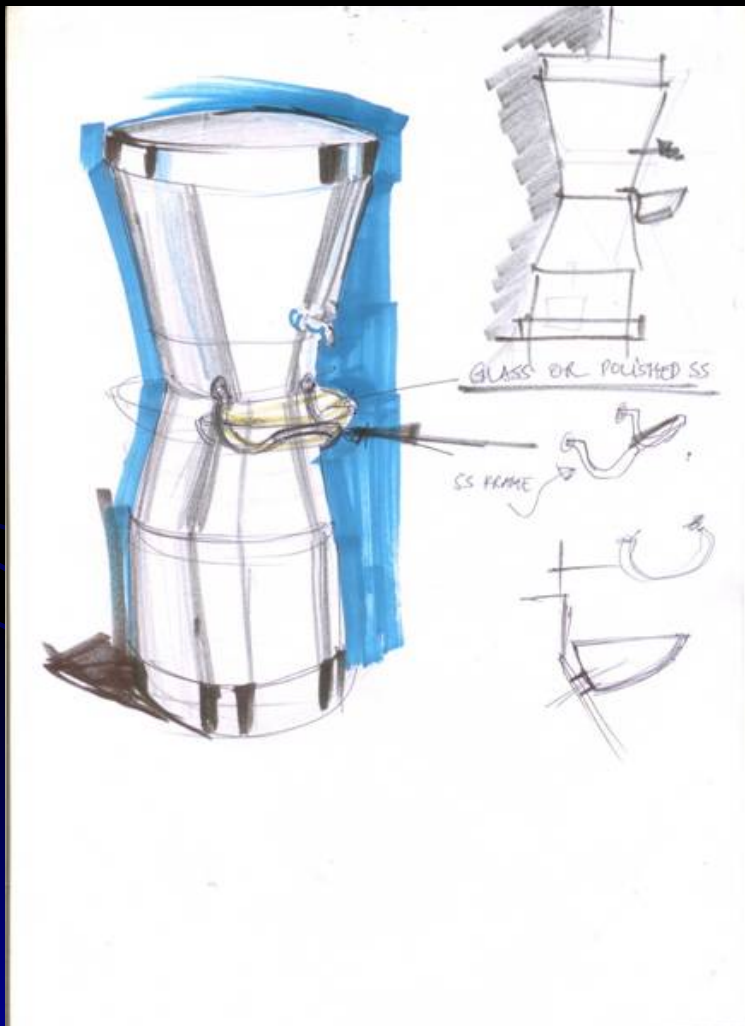
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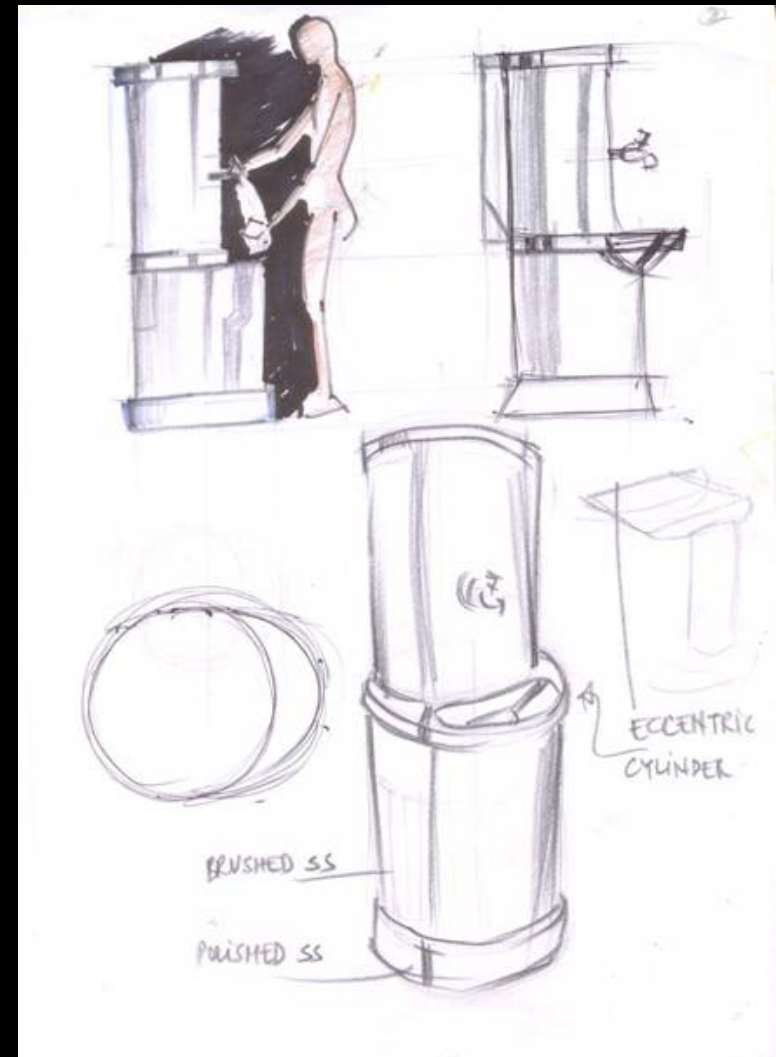
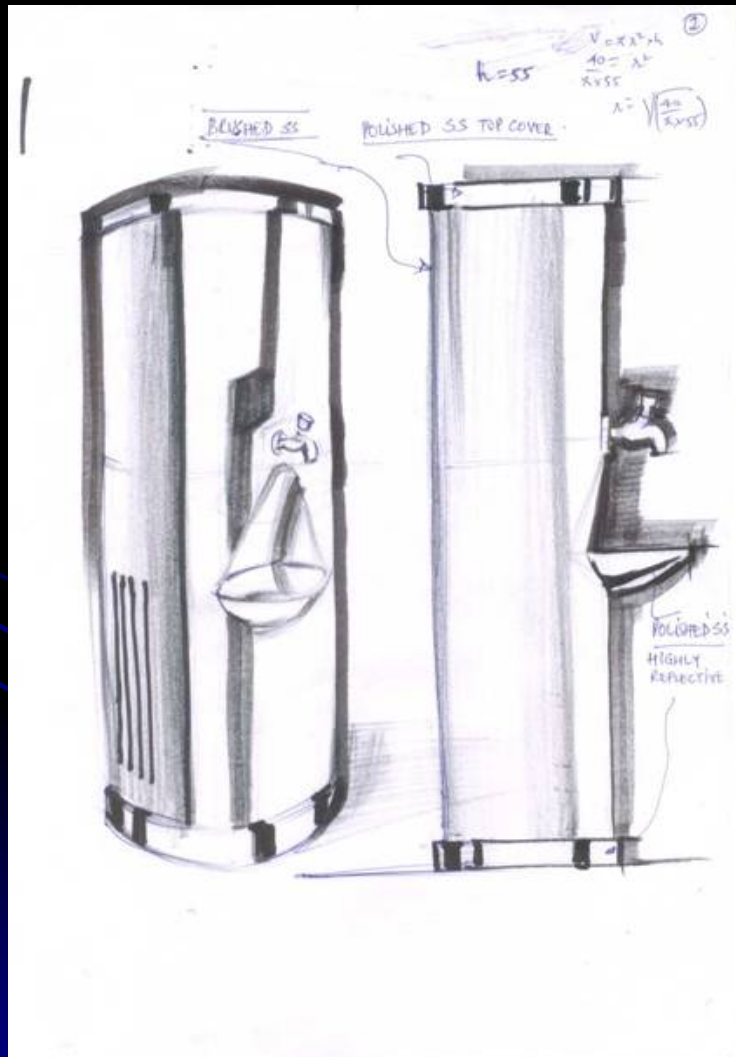
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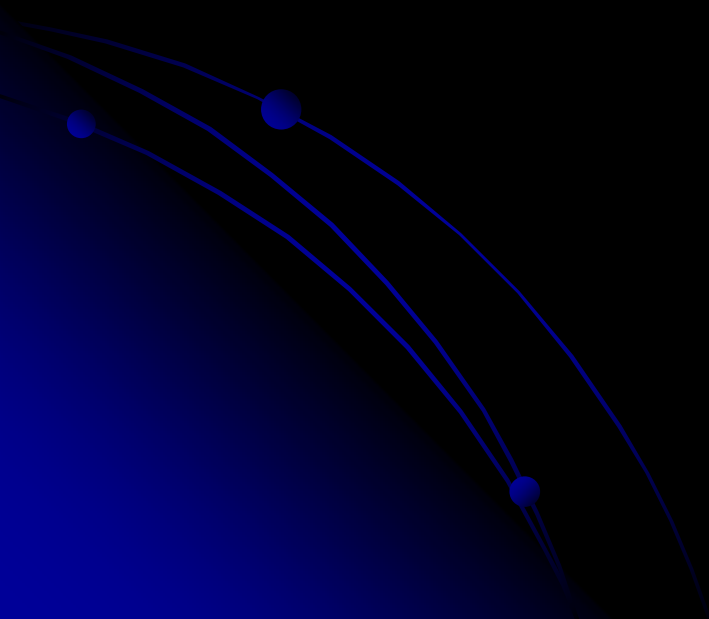
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8. Analysis of the idea sketches and Understanding the proportion requirements

The sketches were analysed and various other possibilities were discussed. Further improvements were also suggested for the next stage.



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9. Ergonomic height study

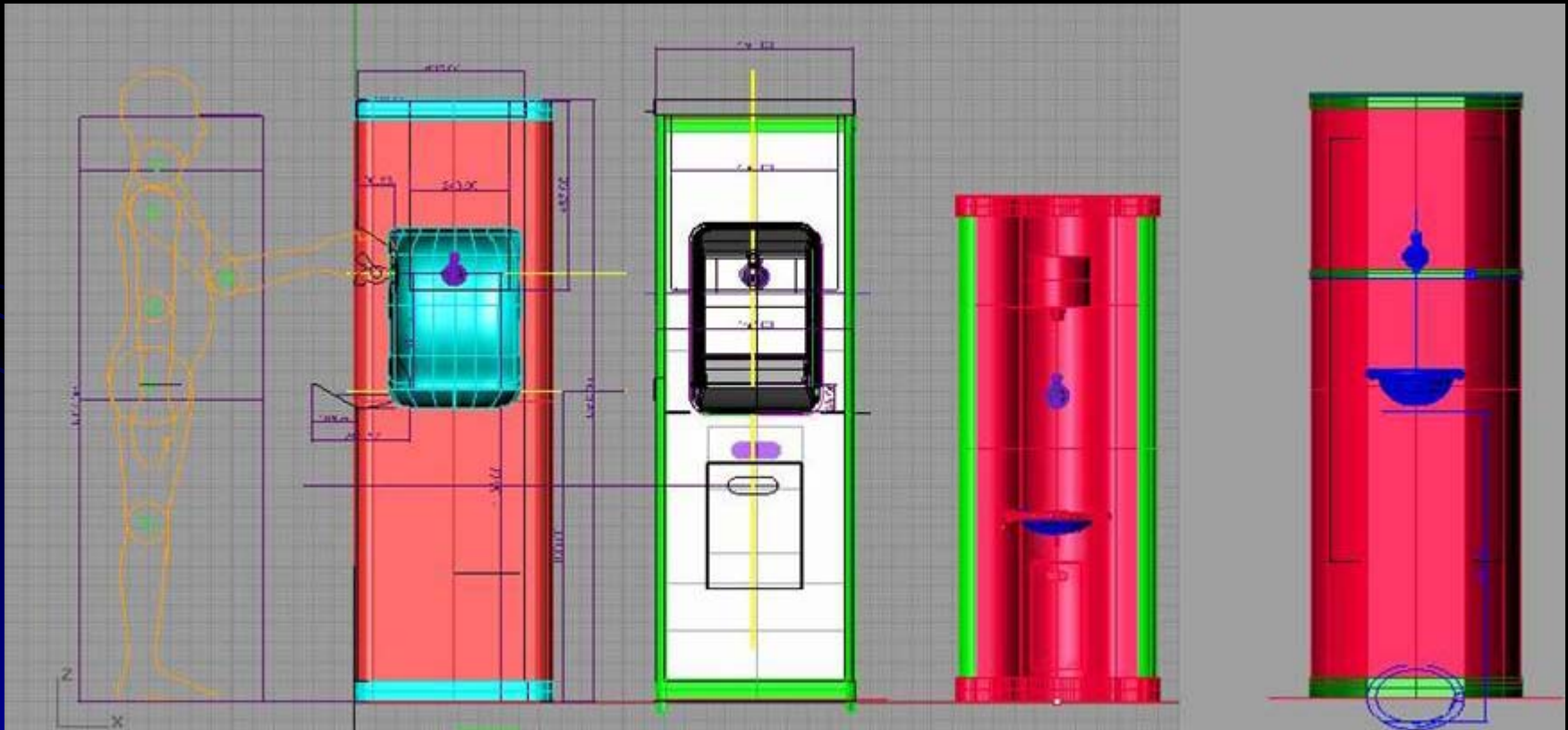
- Thread line models and Enacting



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9. Ergonomic height study

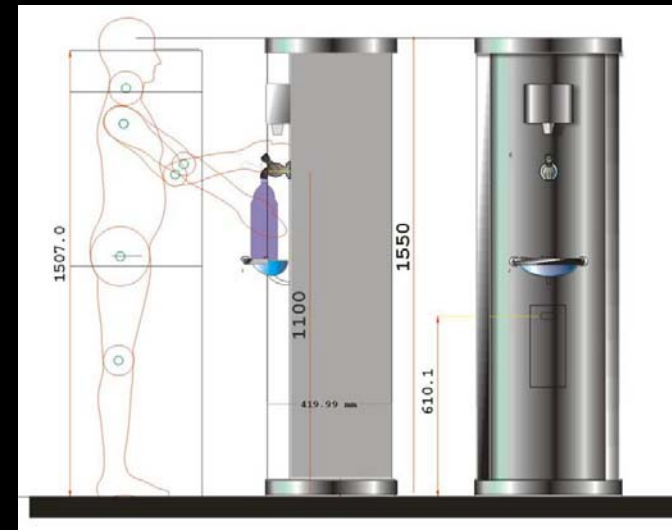
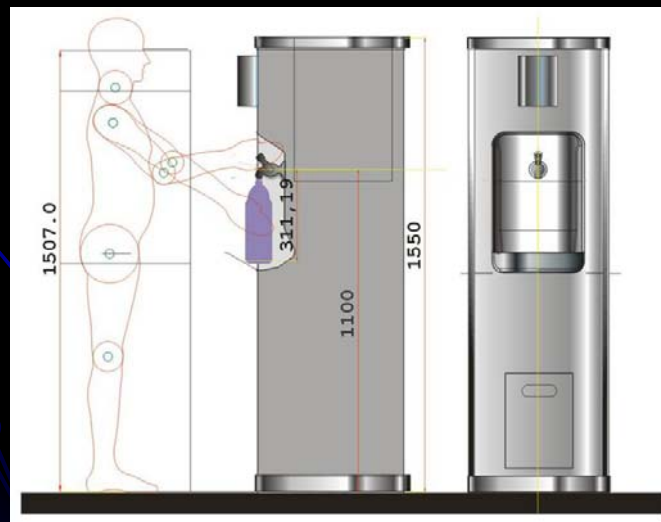
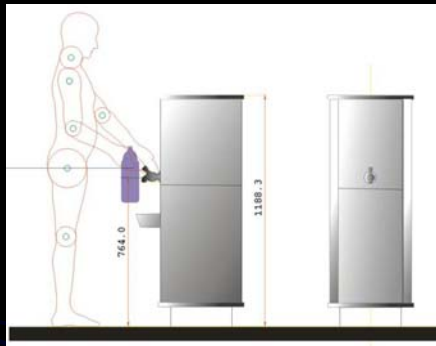
- Study Using 50th percentile manique in CAD



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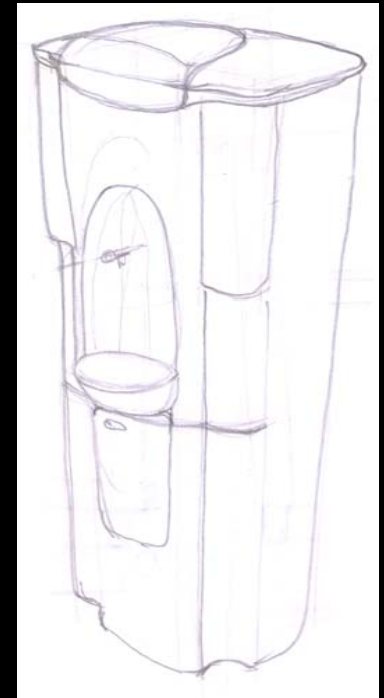
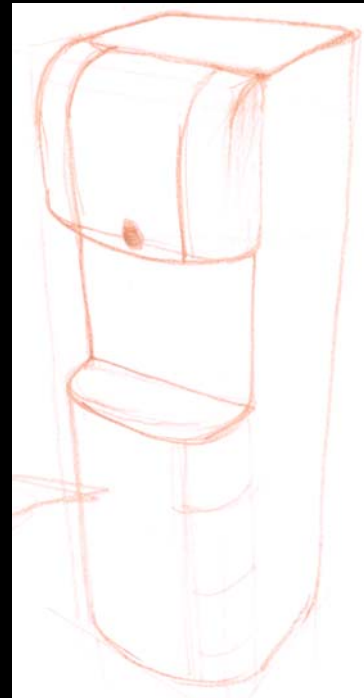
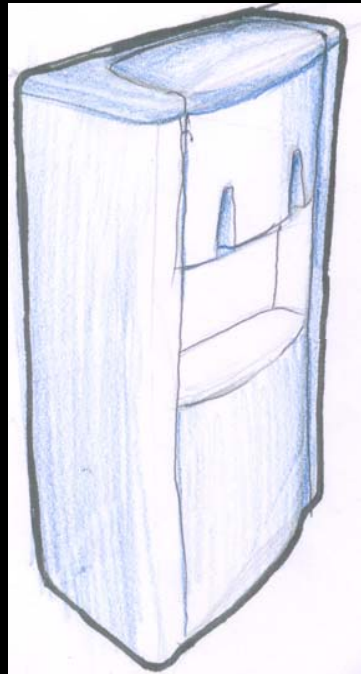
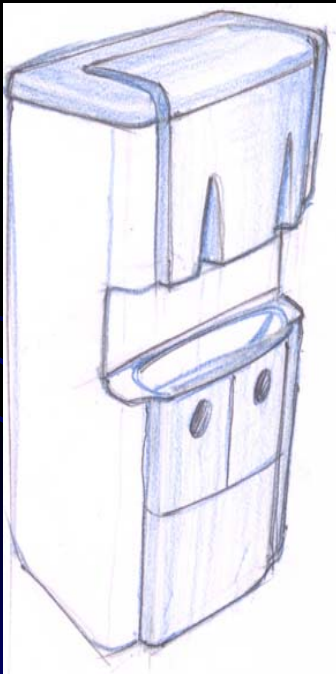
9. Ergonomic height study

- Study Using 50th percentile manique in Corel Draw rendering



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10. Refinement in sketches and renderings



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11. 2D Montage for understanding Proportional relationship



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12. 3D Physical Mock up models, Rhino Modelling and presentation to client

Concept One



Concept Two



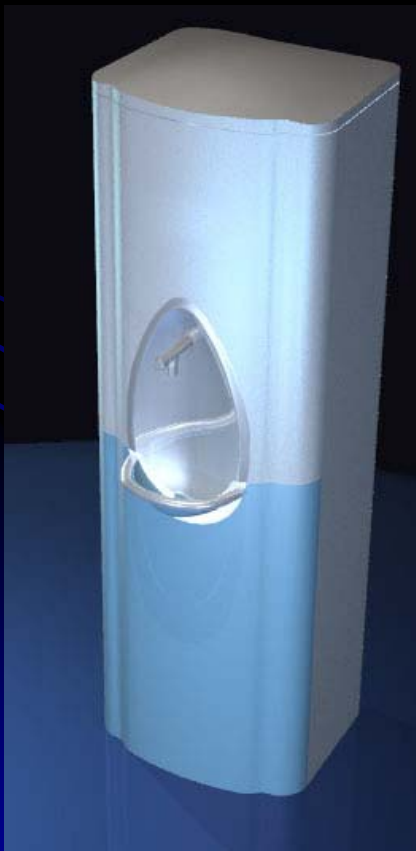
Concept Three



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12. 3D Physical Mock up models, Rhino Modelling and presentation to client

Concept One
Modified



Concept Two
Modified



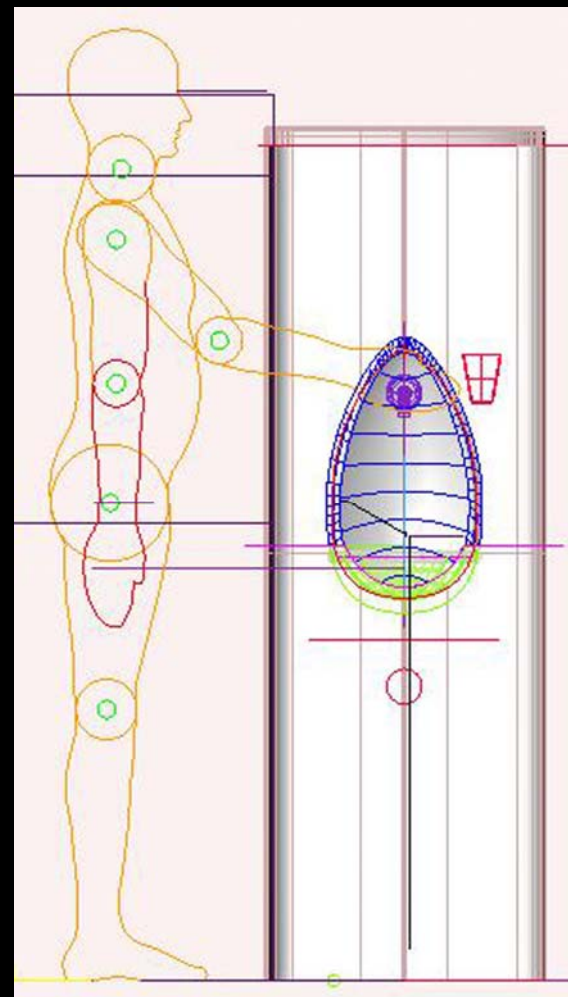
Concept Three
Modified



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13. Refinements in the 3D models

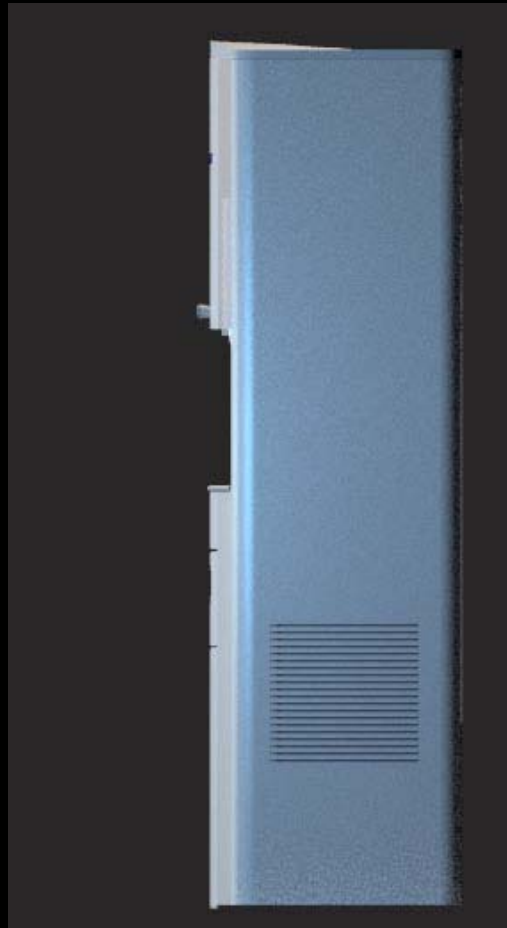
Concept One



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13. Refinements in the 3D models

Concept Two

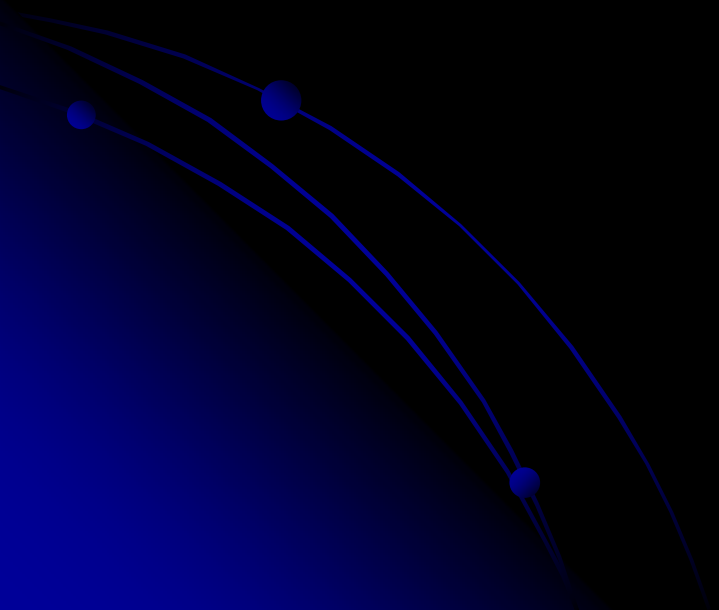


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13. Refinements in the 3D models

Concept Three





conclusion

Inferences

- Combination of **Matte finished** and **Polished Stainless steel** can be used.
- Possibility of using **glass or plastic tray** depending on the category of the product.
- **Deep drawn SS** can be used for modular assembly.
- Present problem of water spillage from the tray should be addressed.
- **Cup dispenser and Used cups bin** can be incorporated to avoid cups being kept on the top surface or Steel cups been tied with chains.
- Area below the tray can be utilized for **storage purpose**.
- **Looks of the product** should make the user to display it at prominent places. The product should not look like a typical mechanical machine/unit.
- The ergonomic height of tap for **90th Male is 1000 mm** measured from floor.
- Distance between the tap and tray should be **less then 300 mm** and arrangement be made around the tray for the user to **fill 1 ltr bottle**.
- Aspect ratio: **height = 3 * width** (approximately)
- With the increase in height the steel usage will increase, thus increasing the cost. Since the cost has to reduced plastic panels may be provided below the tray level