

The Magnetized Ratchet

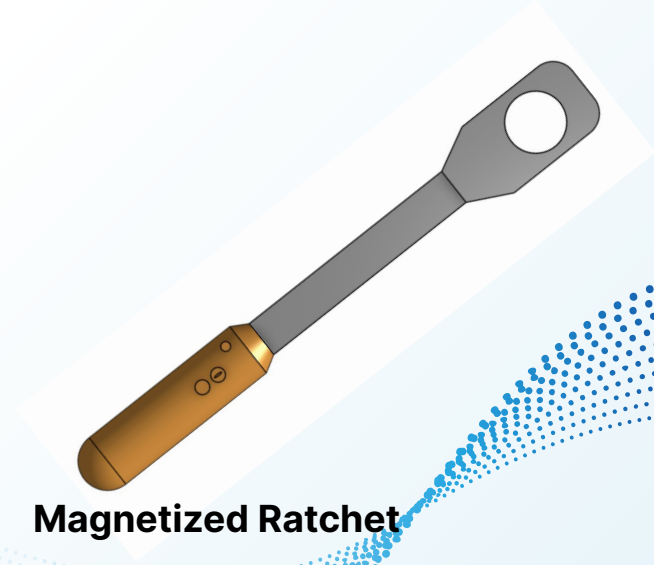
A decorative graphic consisting of multiple concentric, wavy lines of small blue dots. The dots are arranged in a pattern that resembles a sine wave or a series of overlapping ripples, creating a sense of motion and depth. The pattern is set against a solid dark blue background.

1. Background Information

The background is a solid blue color. It features decorative white dotted patterns that form wavy, horizontal lines. These patterns are more densely packed in some areas, creating a sense of depth and movement. The waves appear to flow from the left side towards the right, with some peaks and valleys. The overall effect is modern and abstract.

Our Target Audience

- Mechanics
- Mechanic Shops
- The Do it Yourselfers
- Individuals on a Budget
- Fathers



Downsides of Standard Ratchets

You have to:

- Change Sockets Constantly
- Wait Longer at Mechanic Shops
- Spend More Money on Sockets You Will Rarely Use



Advancements of the Magnetized Ratchet

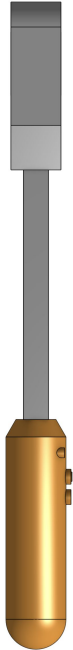
- Eliminates the Need to Switch Sockets
- Adapts to any Size Fastener
- Fast & Easy Process
- Saves Time and Money

2. Technical Description

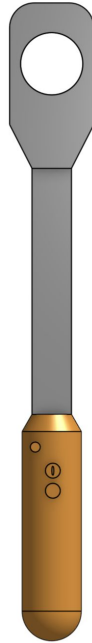
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The Magnetized Ratchet

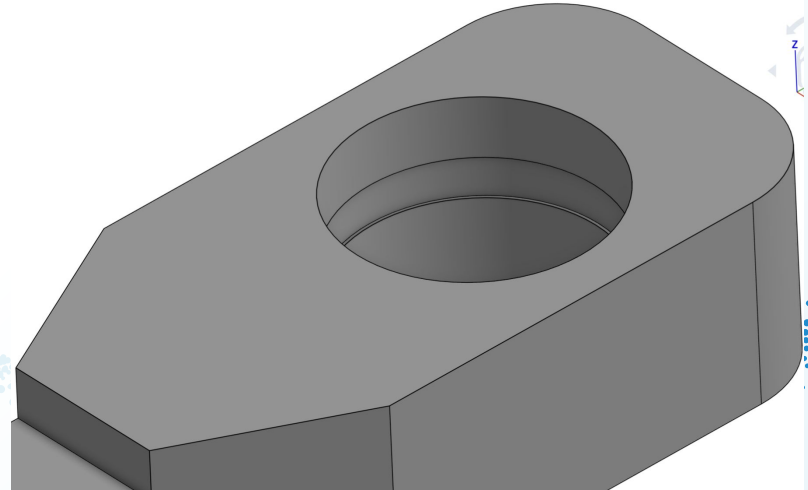
Side profile



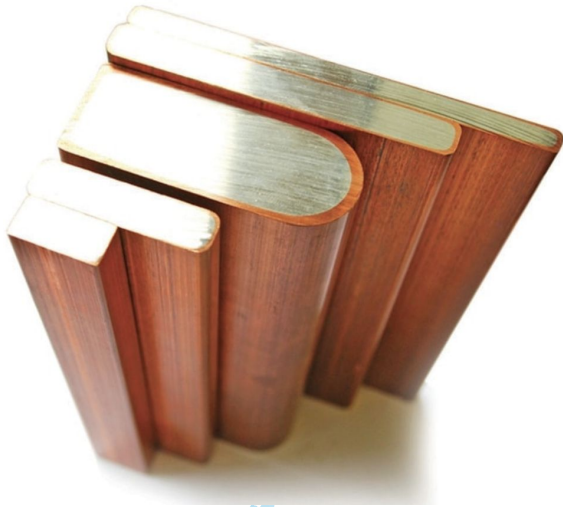
Front profile



Zoomed in Magnet



Ratchet Shell



- The shell of this product is aluminum copper
- Low oxidation
- Lightweight and durable
- Length 110mm width 8mm

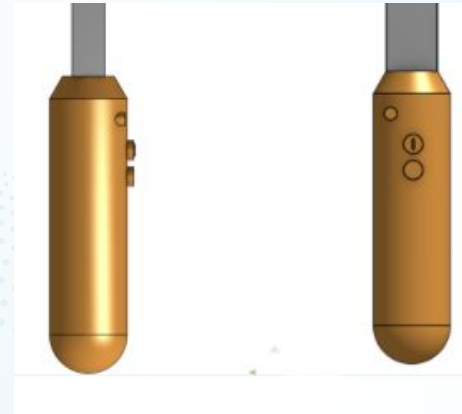
Electromagnetic Magnet

- Circular shaped magnet that is 12.7mm in diameter
- Copper wire wrapped around iron and connect to batteries



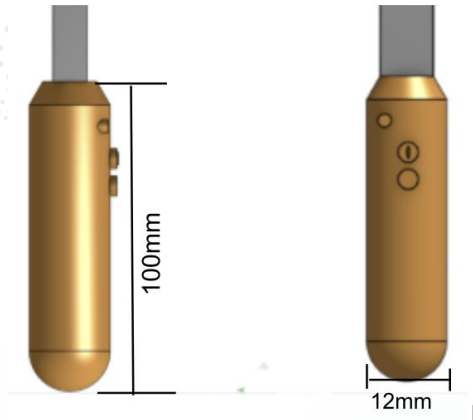
Battery Compartment

- A 40mm piece of plastic w/ 12mm diameter
- 5× 4.2v lithium ion batteries
- Wired in series to have a stronger voltage



Rubber Button and Rubber Hand Grip

- The rubber cover for the on and off button is a 3mm by 3mm
- Hand grip cover is a orange color
- Silicone
- Length 100mm width 12mm



3. Cost and Profit

The background of the slide is a solid blue color. Overlaid on this background are several wavy, horizontal lines composed of small, dark blue dots. These lines create a sense of motion and depth, flowing from the left side towards the right. The lines vary in density and curvature, with some appearing more prominent than others.

Cost

-Initial/Prototype Price for 1 unit:

Materials	Price of Development
Aluminum Bronze Scraps	\$10.00
4.2 Lithium Ion batteries x5	\$6.40
Copper Wire	\$1.88
Iron Scrap	\$1.00
Rubber	\$10.00
On/Off Switch	\$0.76
Cost of Labor	\$4.00
Cost of Rent	\$1.00
Total per Unit	\$35.04

Costs (continued):

- Expected Expenses Per Month:

	Expenses	Price per Month
1.	Place to Rent	\$5,000
2.	Labor Costs	\$20,000
3.	5,000 Ratchets	\$150,200
Total		\$175,200

Profit from Direct Sales:

Chart of the first two years of business:

	Description	Value
1.	Total Expenses Per Month	\$175,200
2.	Revenue Per Month	\$500,000
3.	Profit	\$324,800

Chart after first two years of business:

	Description	Value
1.	Total Expenses Per Month	\$300,400
2.	Revenue Per Month	\$1,000,000
3.	Profit	\$699,600

Profit Selling to Wholesalers:

Chart of the first two years of business selling to wholesalers:

	Description	Value
1.	Total Expenses Per Month	\$175,200
2.	Revenue Per Month	\$375,000
3.	Profit	\$199,800

Chart after first two years of business selling to wholesalers:

	Description	Value
1.	Total Expenses Per Month	\$300,400
2.	Revenue Per Month	\$750,000
3.	Profit	\$449,600

Competition Cost

Brand	Item Name	Cost
Pittsburgh	225 Piece Mechanics Set	\$149.99
Milwaukee	50 Piece Socket Wrench Set	\$125.00
Magnetized Ratchet	1 Piece Ratchet	\$100.00

Comparison of Mechanic Ratchet Sets

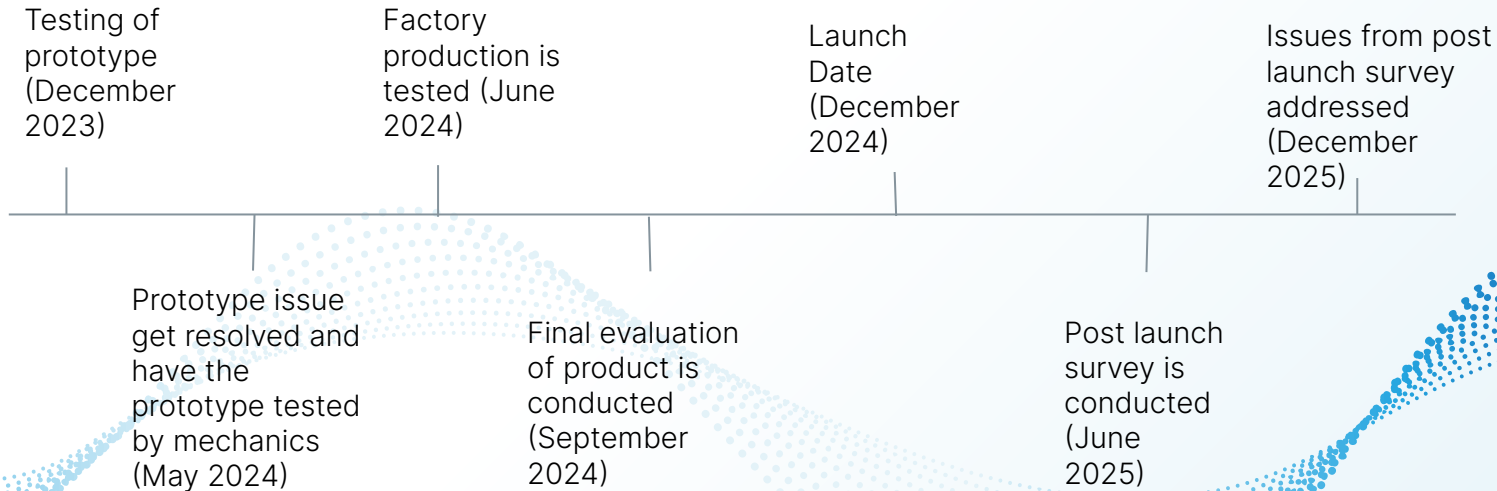
Competition Comparison:

- 4 Top Brands - around \$150 for ratchets and sockets meanwhile the magnetized ratchet is \$100.
- Accessories not included/cost more
 - Ex. Sockets:
 - SAE sockets
 - Impact Sockets
 - Driver Sockets
 - Pass-through Sockets

4. Evaluations

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Production Timeline



Final Evaluation

- Handle grip test: testing the grip of the handle in several scenarios
 - Ex: the handle being lightly covered in grease
- Magnet test: testing strength of magnet
- Scenario test: how often can the ratchet be used.
- Marketed towards automotive industry

Post Launch survey

Durability:

- Body evaluated through tension tests
- Magnet evaluated through heat tests
- Drop test

Reliability:

- Based on survey
- Product would be used in real world
- Wide range of participants

Cost:

- Evaluated through customer feedback
- Survey provided 6 months after launch

Thanks for listening!

Any Questions?

