

Identity 1



Brief

The brief we were given was reasonably simple. We had to purchase a hand-held product which requires a power source, either battery or mains powered. We must evaluate our product on many different levels such as function, aesthetics, branding, consumer expectations, user cycle, etc.

Typical products previous years have used for this project are Hairdryers, Power Drills, Electric Screwdrivers, Food Blenders, etc.

The Aims of this project are:

- To develop our visual note-taking, drawing, detailing and communication skills in product representation.
- Develop our knowledge and understanding of material usage, production processes and the use of technology in products.
- Develop our knowledge and understanding of aesthetics, assembly, brand, design engineering, user expectations, marketing and manufacturing.

Product Choice

There was obviously a very large choice of products to pick from. I decided that I did not wish to have a product that anyone else would choose. I was only limited in my choice of product by two factors, my budget (under £20.00) and the fact that I would have to really use this product.

I decided that maybe an electric razor would be a good idea, they were reasonably cheap and there was a large variety on the market. However, if I did buy a razor I would inevitably have to shave off my beard, which I wasn't too happy about.

So therefore, I looked at beard trimmers instead. These products fitted in the criteria perfectly and again, there was a large variety of them on the market.

Manufacturers

When researching trimmers, the following companies tended to dominate the market:

REMINGTON®

BaByliss®

BRAUN

PHILIPS

WAHL®

SEVERIN

Panasonic®



Beard Trimmers



Beard Trimmers are produced by companies such as Remington, Babyliss, Philips, Braun, etc. There were many different models of trimmer to choose from, but I wanted an interesting beard trimmer produced by an interesting company. I looked at features such as aesthetics, advertising, functionality, etc. Price influenced my decision as most of the Remington and Babyliss products were very expensive. After a little time of deliberation I decided to purchase a Philips QT 4020 Beard Trimmer.

I purchased my trimmer from Argos Extra on Sauchiehall Street for £19.85 which was just under my budget. The transaction was quick and easy due to Argos having terminals where you can check if your product is in stock and if you so choose, you can pay by card at that terminal instead of having to wait in a queue.



A History of Philips

Philips Heritage

The foundations of Philips were laid in 1891 when Anton and Gerard Philips established Philips & Co. in Eindhoven, the Netherlands. The company began manufacturing carbon-filament lamps and by the turn of the century, had become one of the largest producers in Europe. Stimulated by the industrial revolution in Europe, Philips' first research laboratory started introducing its first innovations in the x-ray and radio technology. Over the years, the list of inventions has only been growing to include many breakthroughs that have continued to enrich people's everyday lives.



History of Philips Brand

Wherever we encounter it, the Philips brand is a familiar sight in millions of households and buildings throughout the world with its instantly recognizable word mark of seven blue capitalized letters. Although the company has evolved and grown over more than hundred years, Philips' visual brand identity is rooted in its early years at the beginning of the 20th century.

Philips in 20th Century: First Lamp Advertisements



Established in 1891 in Eindhoven, the Netherlands, Philips & Co. was founded to meet the growing demand for light bulbs following the commercialization of electricity.

In the early years of Philips & Co., the representation of the company name took many forms: one was an emblem formed by the initial letters of Philips & Co., and another was the word Philips printed on the glass of metal filament lamps.

One of the very first campaigns was launched in 1898 when Anton Philips used a range of postcards showing the Dutch national costumes as marketing tools. Each letter of the word Philips was printed in a row of light bulbs as at the top of every card. In the late 1920s, the Philips name began to take on the form that we recognize today.

Philips Identity Trademarked: Origins of the Shield Emblem



The now familiar Philips waves and stars first appeared in 1926 on the packaging of miniwatt radio valves, as well as on the Philigraph, an early sound recording device. The waves symbolized radio waves, while the stars represented the ether of the evening sky through which the radio waves would travel.

In 1930 it was the first time that the four stars flanking the three waves were placed together in a circle. After that, the stars and waves started appearing on radios and gramophones, featuring this circle as part of their design. Gradually the use of the circle emblem was then extended to advertising materials and other products.

At this time Philips' business activities were expanding rapidly and the company wanted to find a trademark that would uniquely represent Philips, but one that would also avoid legal problems with the owners of other well-known circular emblems. This wish resulted in the combination of the Philips circle and the word mark within the shield emblem.

In 1938, the Philips shield made its first appearance. Although modified over the years, the basic design has remained constant ever since and, together with the word mark, gives Philips the distinctive identity that is still embraced today.

Advertising Philips Brand Today



Whilst the logo of the company has been consistent since the 1930s the way in which Philips has advertised and communicated to the outside world has varied. In general, until the mid-1990s all advertising and marketing campaigns were carried out at product level on a local market basis. This led to many different campaigns running simultaneously, not giving a global representation of Philips as a global company.

To establish consistent global presence, in 1995 Philips introduced the first global campaign in 1995 under the tagline "Let's make things better". This theme encapsulated the "One Philips" thinking and was rolled out globally in all markets and on all Philips products. This was also the first campaign that bought the whole company together, giving the employees a sense of belonging and providing a unified company look for an external audience.

In September 2004, Philips launched its "sense and simplicity" brand promise, which marked a new way forward for the company. "Sense and simplicity" reflects Philips' commitment to be a market-driven company that provides products and services that fulfil the promise of being "designed around you, easy to experience and advanced".

In 2008, the total estimated value of Philips brand increased by 8% to USD 8.3 billion and was ranked the 43rd most valuable brand in Interbrand's 2008 ranking of best global brands.

Philips Key Inventions

The compact audio tape cassette:

In 1958, following four years of development, RCA Victor introduced the stereo, quarter-inch, reversible, reel-to-reel RCA tape cartridge. It was a cassette, big (5" x 7"), but offered few pre-recorded tapes; despite multiple versions, it failed.



In 1962, Philips invented the compact audio cassette medium for audio storage, introducing it in Europe in August, 1963 (at the Berlin Radio Show), and in the United States in 1964, under the trademark name Compact Cassette.

Although there were other magnetic tape cartridge systems, the Compact Cassette became dominant as a result of Philips's decision in the face of pressure from Sony to license the format for free. Philips also released the Norelco *Carry-Corder 150* recorder/player in 1964. By the mid-1960s over 250,000 recorders had been sold in the US alone and Japan soon became the major source of recorders. By 1968, 85 manufacturers had sold over 2.4 million players.

In the early years, sound quality was mediocre, but it improved a lot by the early 1970s when it caught up with the quality of 8-track tape ... and kept improving. Cassette went on to become a popular (and re-recordable) alternative to the 12 inch vinyl LP during the late 1970s.

The VCR (Video Cassette Recordable):

The invention of VCR was initiated by the invention of Audio Cassette players. The first type of VCR was the U-matic that was developed by Sony Japan during 1970. The home VCR systems, that we see now, were developed by Philips in 1972. Since large organizations like Philips and Sony work in research teams, it is difficult to tell one name that invented the VCR as it was a collaborative effort of the team working on it



The CD (Compact Disc):

Philips publicly demonstrated a prototype of an optical digital audio disc at a press conference called "Philips Introduce Compact Disc" in Eindhoven, The Netherlands on March 8, 1979. Three years earlier, Sony first publicly demonstrated an optical digital audio disc in September 1976.



Later that year, Sony and Philips Consumer Electronics (Philips) set up a joint task force of engineers to design a new digital audio disc. The task force, led by prominent members Kees Schouhamer Immink and Toshitada Doi, progressed the research into laser technology and optical discs that had been started independently by Philips and Sony in 1977 and 1975, respectively. After a year of experimentation and discussion, the taskforce produced the *Red Book*, the Compact Disc standard.

The CD was planned to be the successor of the gramophone record for playing music, rather than primarily as a data storage medium. Only later did the concept of an "audio file" arise, and its generalization to a data file. From its origins as a musical format, CDs have grown to encompass other applications. In June 1985, the computer readable CD-ROM (read-only memory) and, in 1990, CD-Recordable were introduced, also developed by both Sony and Philips. The CD's compact format has largely replaced the audio cassette player in new automobile applications, and recordable CDs are an alternative to tape for recording music and copying music albums without defects introduced in compression used in other digital recording methods. Other newer video formats such as DVD and Blu-ray have used the same form factor as CDs, and video players can usually play audio CDs as well.

The Philishave Razor:



Philishave was the brand name for the electric shavers manufactured by the Philips Domestic Appliances and Personal Care unit of Philips (in the U.S.A., the Norelco name is used instead). In recent years, Philips had extended the Philishave brand to include hair clippers, beard trimmers and beard shapers. Philips used the Philishave brand name for their shavers from 1939 to 2006.

The Philishave shaver was invented by Philips engineer Alexandre Horowitz, who used rotating cutters instead of the reciprocating cutters that had been used in previous electric shavers.

The shaver was introduced in 1939, though initial production was limited due to the outbreak of World War II (the production facility in Eindhoven, the Netherlands was overrun by the German Army in 1940). After the war, a slightly improved version of the cigar-shaped single-head shaver was introduced. A more ergonomic egg-shaped single-head model was introduced in 1948 and was designed by US industrial designer Raymond Loewy. Global sales increased markedly after a double-head model was introduced in 1951. In 1952, production of shavers shifted from Eindhoven to a new production facility in Drachten, the Netherlands. Philips currently has two production centres for shavers: Drachten and Zhuhai, China. A triple-head model was test marketed in Australia and New Zealand in 1956, but would not be introduced globally until 1966. In 1980, Philips introduced the *Lift & Cut* Philishave shaver with lifters which pull whiskers slightly before cutting, allowing for closer shaves.

The brand name Philishave was phased out in 2006 so shavers now bear only the Philips name. Philips is now co-branding their shavers sold in the USA as "Philips Norelco" in preparation of a phase-out of the Norelco name.

My Philips Experience



The packaging of my Philips QT 4020 Beard Trimmer is very simple, but yet very effective. The white background makes the product and the manufacturer stand out from the rest of the packaging. Also, the tag-line "Precise and even trim" is simple and goes by the common expression: "does exactly what it says on the tin."

The vacuum formed packaging is designed to not only hang, but also stand freely (if for example a retailer wishes to display it on a shelf easily). It is not heavy at all and quite easy to hold.

When I got home and tried to open the packaging, I had a very hard time trying to find a place to start. I found that it was nearly impossible to get in to it with only your hands. I eventually used a studio knife to get to my new trimmer. In the 'box' compartment behind the trimmer were the charger, brushes and instruction manual & warranty.

After taking everything out of the packaging, I then tried putting everything in the same way it had came out. This was very easy as there was plentiful space to place the charger, brushes, etc and the trimmer itself has a vacuum moulded place.

To be honest, buying this trimmer felt quite special. Philips have managed to make it quite a special experience to purchase and/open their products.



The Product

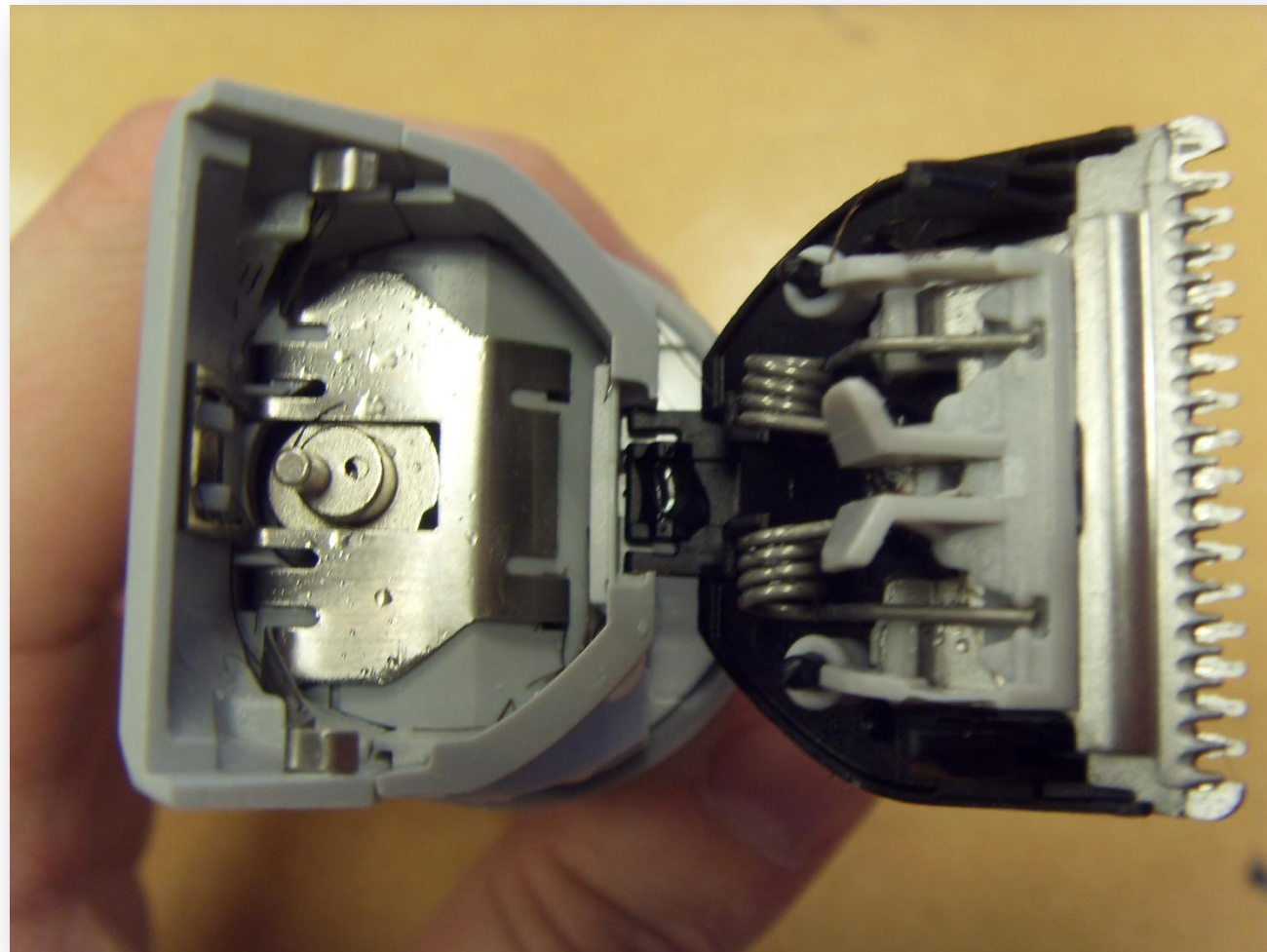


The trimmer has a simplistic design, with a twisting mechanism to raise/lower the shaving comb, a simple on/off switch and an easy-to-clean razor. The twisting mechanism has 9 set positions, depending on how long you wish your beard to be.

The comb on top of the razor head is designed so that your hair is not tugged; it is quite comfortable and glides around the contours of the face easily. The 'collar' and on/off switch are made from a more rubber-like plastic than the acrylic plastic used for the main body. This helps to maximise the grip when using the controls.

The aesthetics of the product are pleasing; I think it was most likely developed so that it blends in with most bathrooms. This is why neutral colours were used. It won't stand out in a room. It does, however, have a quite cool look to it because of its great curves and classic Philips style.

Ergonomically, the trimmer fits the hand perfectly. The slightly curved body allows for perfect comfort. It even has a dent for your thumb. As mentioned before, the rubber controls are also very comfortable.



Hygiene is an important factor with products like trimmers and razors. This is why Philips has produced this trimmer and many other shavers to be water tight. This is simply so that it can be run under a tap after use.

You are also supplied with a cleaning brush. This is the standard brush supplied with most Philips shavers and trimmers. This is useful for cleaning small hairs from the razor itself or inside the razor head (see image left).



The adjustable comb can be taken off completely which allows for easier cleaning and maintenance.

The trimmer's use of curves also means that there are very few corners in which hair or dirt can build up.



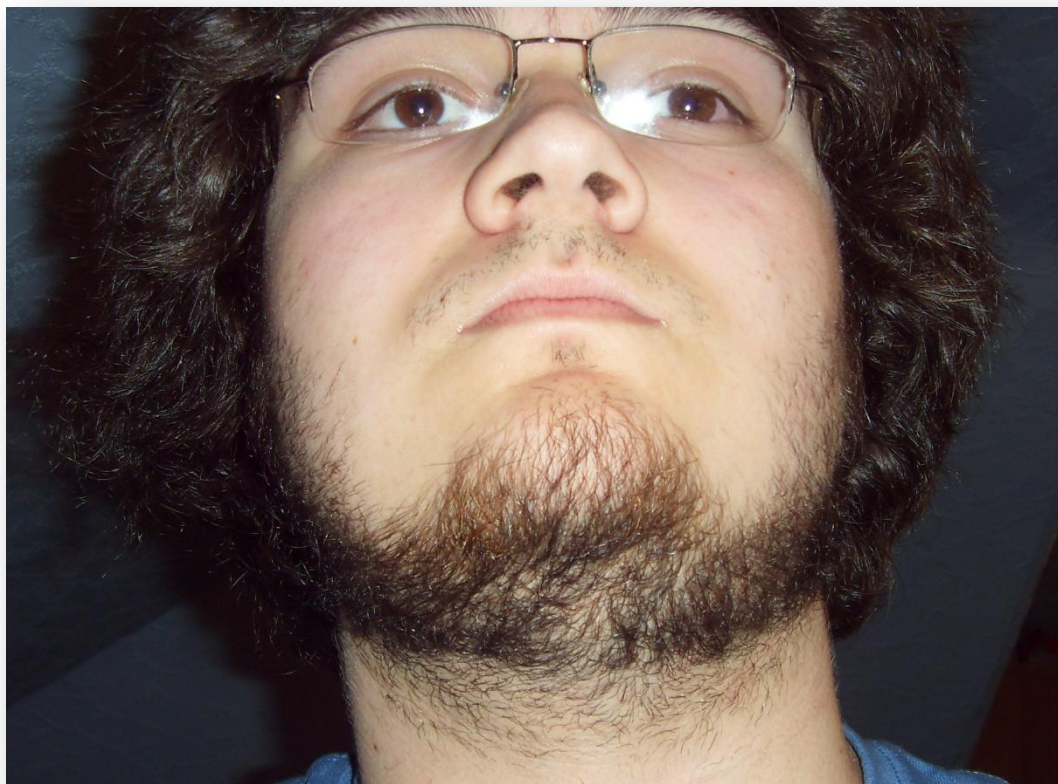
The image to the left is of the comb fitting that covers the razor head. The comb itself is transparent for a few reasons. One, to see where you are trimming, and two if there are any loose hairs on the comb, they are easy to see.

The image on the right is to display the controls of the trimmer.



Using the Product

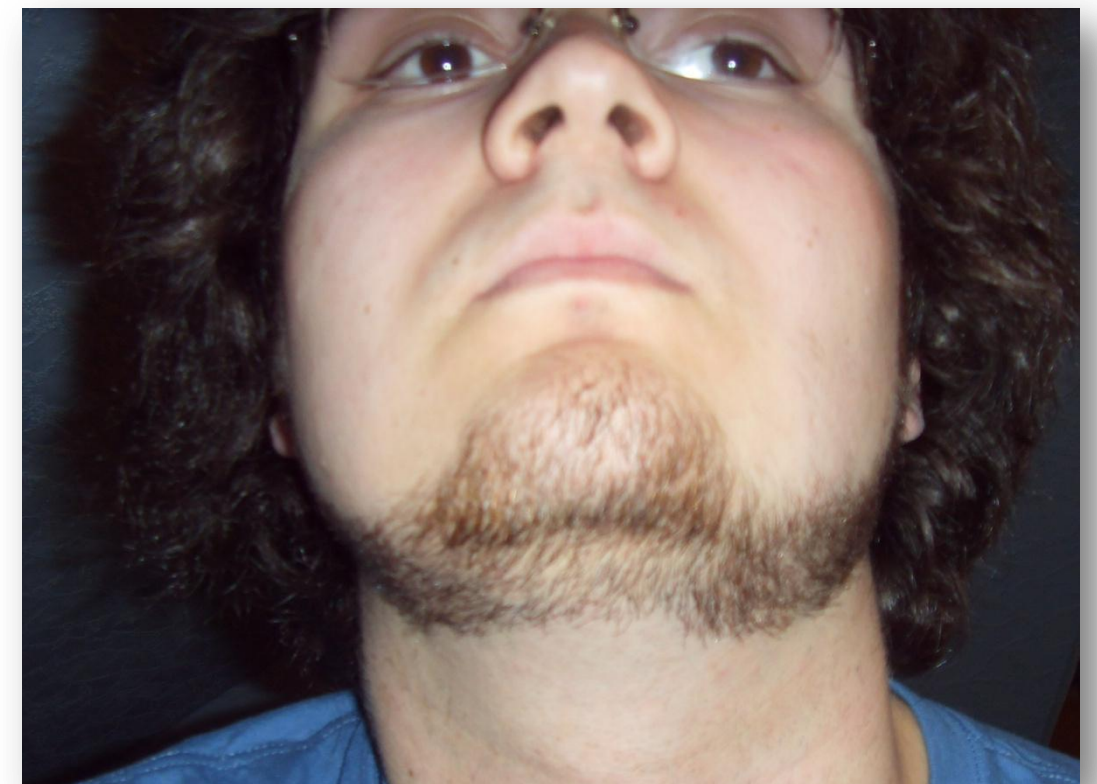
BEFORE



When I purchased my beard trimmer, it is quite obvious that I really, really, really needed to use it! (See left)








After a couple of miraculous minutes in front of the mirror, I was very neat and tidy. To be honest, I also shaved, but don't be fooled into thinking that was what makes the difference in these photos!

AFTER



Having never used an electrical beard trimmer, (I had used scissors before), I was pleasantly surprised to how easy it was to use. I was also surprised that the razor did not tug at my hair. When I was finished, it was easy to clean as all I had to do was wash it under the tap. Any stray hairs were easy to get with the cleaning brush. Philips have managed to take the hassle away from trimming and have made it almost enjoyable.

Materials and Manufacture

Plastic Identification Code	Type of plastic polymer	Properties	Common Packaging Applications
	Polyethylene Terephthalate (PET, PETE)	Clarity, strength, toughness, barrier to gas and moisture.	Soft drink, water and salad dressing bottles; peanut butter and jam jars
	High Density Polyethylene (HDPE)	Stiffness, strength, toughness, resistance to moisture, permeability to gas	Milk, juice and water bottles; trash and retail bags.
	Polyvinyl Chloride (V)	Versatility, clarity, ease of blending, strength, toughness	Juice bottles; cling films; PVC piping
	Low Density Polyethylene (LDPE)	Ease of processing, strength, toughness, flexibility, ease of sealing, barrier to moisture.	Frozen food bags; squeezable bottles, e.g. honey, mustard; cling films; flexible container lids.
	Polypropylene (PP)	Strength, toughness, resistance to heat, chemicals, grease and oil, versatile, barrier to moisture	Reusable microwaveable ware; kitchenware; yogurt containers; margarine tubs; microwaveable disposable take-away containers; disposable cups and plates.
	Polystyrene (PS)	Versatility, clarity, easily formed	Egg cartons; packing peanuts; "Styrofoam"; disposable cups, plates, trays and cutlery; disposable take-away containers;
	Other (often polycarbonate or ABS)	Dependent on polymers or combination of polymers	Beverage bottles; baby milk bottles; electronic casing.

This Product is made mainly from ABS (Acrylonitrile butadiene styrene). ABS has been used as it is typically cheap and relatively easy to work with. Typically, ABS is bought in pellet form and then, in the case of my trimmer - used for injection moulding. I can tell that my trimmer has been injection moulded as there are circular marks around the body that are tell-tale signs of ejection pins.

ABS is a thermoplastic with properties such as: lightweight, rigidity, recyclability and easy-cleaning. I think ABS has been used instead of aluminium or polypropylene because it is cheaper, easier to mould and easier to clean.

Other than ABS, there is also a case for the battery that is made from polypropylene. I think this is used here for better insulation and also, it does not need to look as pleasing as ABS, as it is hidden inside the body of the trimmer.

The metal used in the trimmer is most likely to be either aluminium or stainless steel. This is because Philips would not have wanted to use any material that degraded in water.

The trimmer was manufactured in China. This is because Philips would have to pay less for labour. There are advantages and disadvantages of manufacturing products in countries such as China/Japan/Korea etc. Advantages include cheap labour, speed of construction, etc. However, there are down sides, such as expensive shipping distances, language barriers, etc.

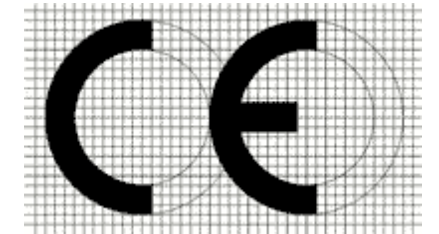
Symbols Found on my Product



Other than the ABS triangle, there were several other symbols on my product. Two of these are: the CE (Conformite Europeene) symbol and the WEEE (waste of electrical and electronic equipment) symbol.

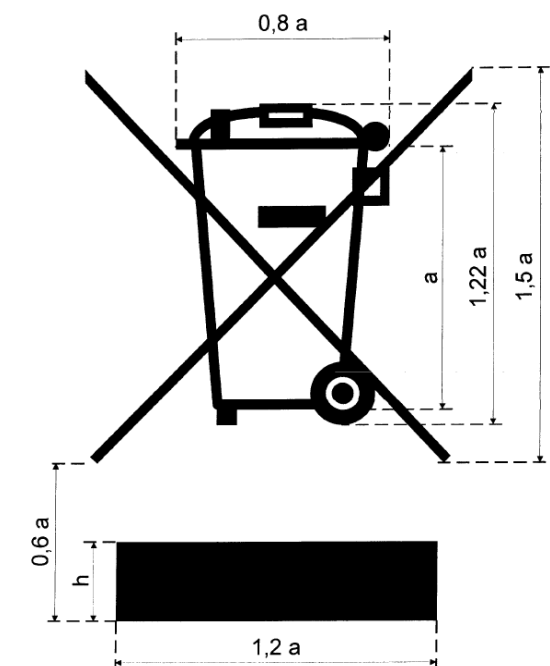
The CE symbol is a mandatory mark on many consumer products which means that the product has met EU safety, health and environmental requirements.

Some products manufactured outside of the EU may not have this sign of approval, they may be approved by another standards group (for example, in U.S.A or Japan) or the CE mark could be illegally printed. The figure on the right shows how the official CE mark is created.

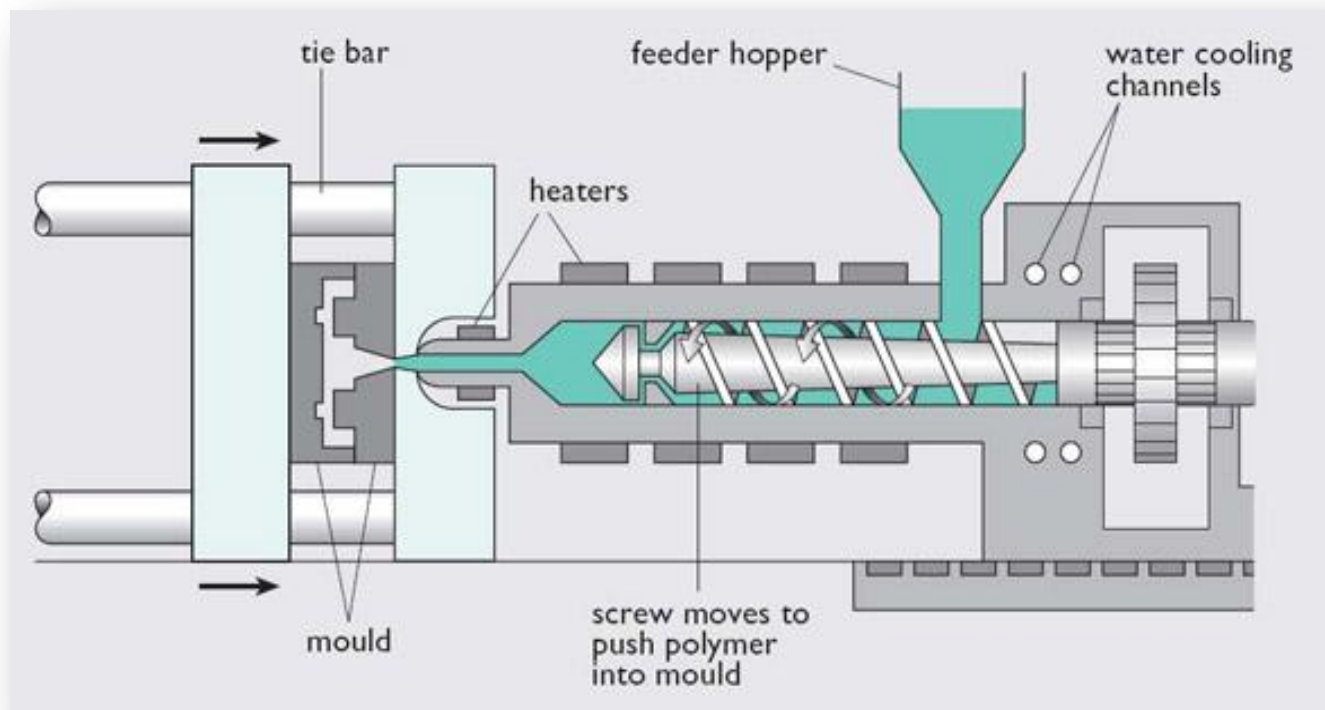


The WEEE mark is present on products that have electrical components that must be disposed of separately to normal waste. This is for recycling purposes, so that valuable materials may be re-used. This is also for environmental reasons, as electrical components have the tendency not to be biodegradable and would eventually cause damage to our planet's atmosphere.

Just like the CE symbol, the WEEE symbol has a specific guideline to presenting the mark on a product (see right).



Manufacturing Process



Injection Moulding

Injection moulding is one of the most common manufacturing processes used today. In the case of my trimmer, pellets of ABS are fed into a hopper. From this hopper, they are then heated into a liquid form whilst being pushed along a cylinder by a screw. Once the plastic has been heated enough, it is forced into a mould. Once the mould is complete, ejector pins push the product from the mould leaving tell-tale circular marks.

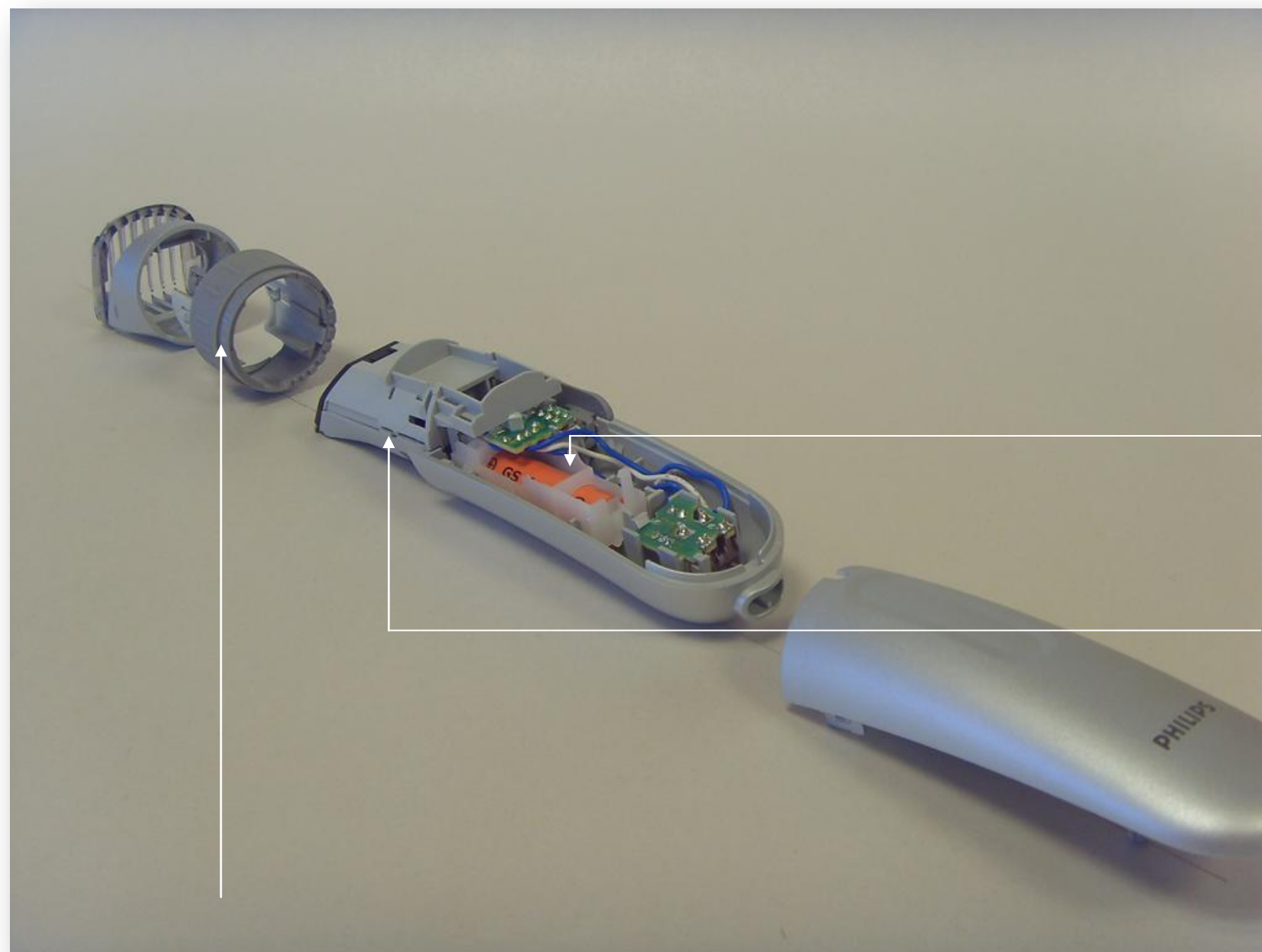
Companies spend a lot of time and research on their moulds as they wish to get the most use out of the space available. Therefore, one mould is likely to make several parts. This is not only for financial reasons, it is also to save time on the construction.

Assembly line

My trimmer would have been assembled on an *Assembly line*. The trimmer would start as simple plastic moulds then, piece by piece, it would be built up. Just like in the photo on the right, each worker would insert a single part and pass it on to the next worker via conveyor belt. Eventually, the finished product is quality tested and then immediately dispatched.



Disassembly and Sort



Philips have designed the trimmer to be easily assembled, as well as dismantled. This is so that, if a faulty product has been sent back or a faulty line has been recalled, workers can easily re-open the product and either fix/replace a faulty component or recycle all components.

When I disassembled my trimmer, I found it very simple. There was one screw at the rear of the product (opposite the "Philips" branding). Once this had been un-screwed, it was a simple case of removing the cover with a gentle pull. When this is done, all wiring and electrics are exposed (including battery and casing).

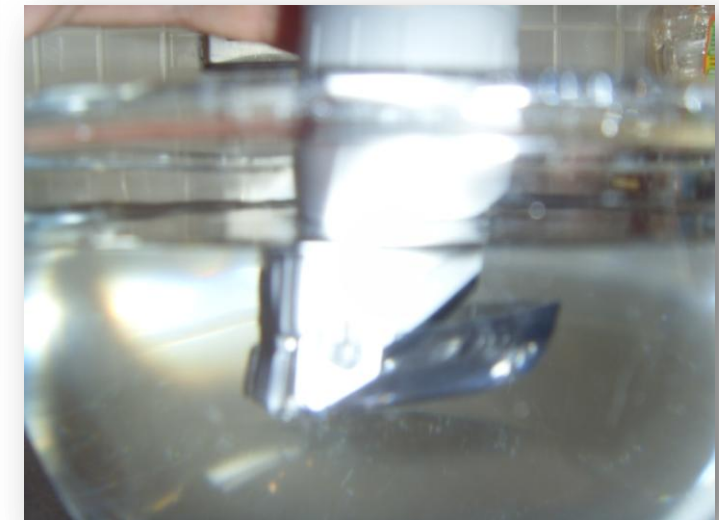
Very few fasteners are used in the trimmer. There are a lot of snap-fits used. An example of this is the razor head, which snaps together and is held in place the tension in a folded piece of metal. The advantages of using snap-fits include less costs in standardised parts, a more rigid fit and easy assembly/disassembly.

The collar and runner simply lift off now that the cover is not stopping it.

Testing

Water-tight Testing

To test the beard trimmer to its limits, I held it under water for a minute whilst it was still switched on. This shows exactly how water tight it really is!



Durability Testing

Again, testing the beard trimmer to its limits, I performed durability tests. This involved, dropping from face height, to the floor and seeing how well it coped.



Ease of Use Testing

In this test, I gave the trimmer to various male friends and asked them to work it without showing them how to use it. This was to test how intuitive it is to use.



Results

Water-Tight Testing Results:

When I tested the trimmer by putting it in a bowl full of water when switched on, I was not overly-confident that the trimmer would triumph in this test. However, contrary to my beliefs, the trimmer managed just fine! I held it under for 1 minute and it came out working as normal. The only downfall, I found, was that the water would collect on the trimmer's surface and not drip off. Therefore, when you put it back down, inevitably a small puddle would emerge.

Durability Testing Results

To test the trimmer for durability, I dropped it from head height on to a wooden floor (as I did not wish to damage my bathroom tiles) five times. I was pleased to find that, yet again, the little trimmer triumphed! Not a scratch! It worked just as well as before.

Ease of Use Testing Results

I approached my father, and my friend Scott, with my beard trimmer and asked them to give it a go. Without any instruction in its use, this was a test to see how intuitive it is to use. Only after a few seconds both had found how to use the collar to adjust the size and then found the on/off switch. My dad found that it was very easy to use and very simplistic, simply saying: "It is really easy to use, does a good job and represents very good value for money."

Conclusion

My Experience

Throughout this project, I have learned a great deal. Including Philips, who up until now I had thought of as very unremarkable! How very wrong I was! I also learned all about the inner workings of trimmers and shavers, for example, how rotational motion is changed into oscillating motion. I am proud of my product and very happy to say I did not destroy it in my testing and that I fully intend to keep using it.

The Trimmer

The Philips Beard Trimmer QT4020 is a brilliant product, perfect for anyone wishing to sport a stylish beard. The value for money that you receive with this product truly is astounding! The Philips trimmer was the underdog of the market when I bought it, not very technologically advanced and nowhere near the most expensive. However, it has more than proven its worth. I would recommend buying this product to anyone with a beard!

Rating

I would rate this product as 8/10. It done the job marvellously but simply has a little more room for improvement such as the surface which collects water, etc.

