

History of PHILIPS '*shaving & grooming*' activities

Diary of products with data on development and marketing

Catalogue of Philips Philishave and Norelco '*Rotary Action*' 1936 – 2006

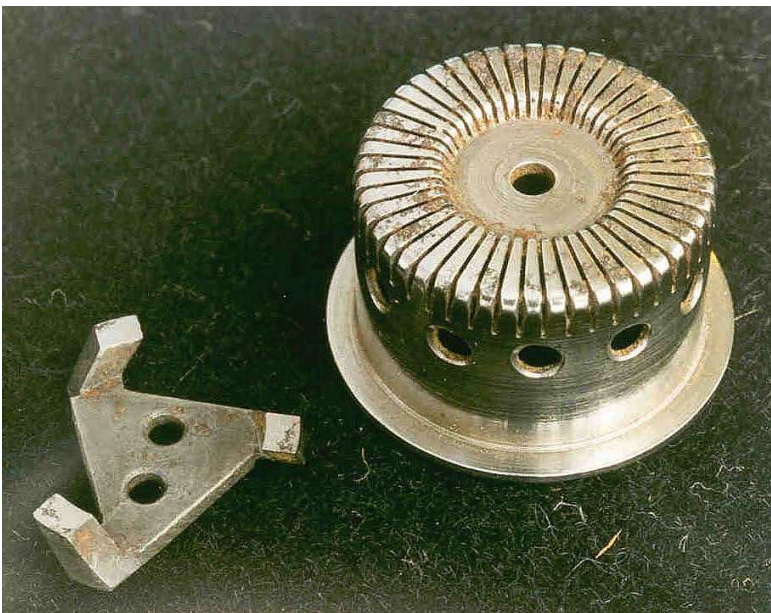
Specifications of a few selected Philips shavers 2007 - 2019

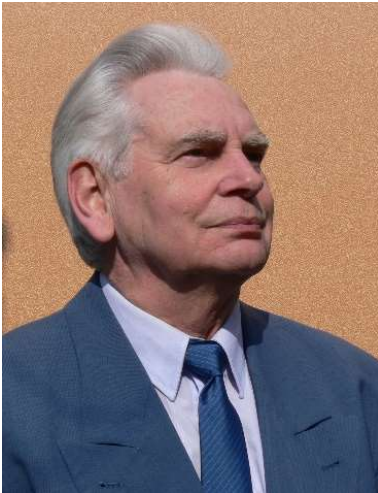


Zephyr shaver > Philips prototype by Alexandre Horowitz & Lex van Dam > Philishave 1939 type 7730

First shaving head 1939 type 7751

Triple Track shaving head 2005 type HQ 9





History of Philips Philishave 'shaving and grooming' 1936-2006

For almost 70 years Philips used the brandname Philishave for Rotary shavers. This catalogue describes the development and marketing during this period. It is a reconstruction, made as private project in the years 1994-2020 by:

Bram Porrey (*1932)

Active for 40 years at PHILIPS in Eindhoven, Drachten and Groningen
 1954-1964 Technical Commercial Domestic Appliances & Personal Care
 1964-1994 Commercial Product Manager for shaving
 1994-2020 Volunteer for Philishave Historical Archive – Philips Drachten

< Bram Porrey picture 2007

Catalogue/Diary Philips Philishave 'shaving and grooming' 1936-2006.

1936 – 1939 study of the USA shaver market. Development of Philips Rotary Action shaving system.
 1939 – 1952 **1939** registration and introduction '**PHILISHAVE**'. Marketing 1-head models.
 1952 – 1966 Philishave and Norelco 2-head designs. 1959-1966 = Floating heads period + Microgroove.
 1966 – 1990 1966 = 3-head model. 1975 = TH design. 1980 = Double Action. 1983 = electronics.
 1990 – 2006 new era in design, function and promotion. End of regular '**Philishave**' use in **2006**.
 2007 – 2019 separate illustrated catalogue of Rotary models. **2019** jubilee shavers 80 years **PhiliShave**.

Additional chapters in the database and catalogue contain Philips and Norelco data on:

- Philips and Carintic vibrafoil shavers 1959 – 1984.
- Trimmer accessories, beard trimmers and hair clippers 1958 - 2004.
- Ladyshave Rotary Action products 1939 - 1974. Other Ladycare products 1959 - 1998.
- Other producers of shavers with RotaryClipper systems ~1950-1990.

Philips interest in the business of shaving dates back to 1935 with the sale of a razor blade holder.

Study of the market and the suggestion to buy and sell USA-made shavers start in 1936.

In 1939 Philips introduce the unique Philishave Rotary Action shaving system.

The introduction of the doublehead 'egg' model in 1952 is the basis for international success.

From 1965 onwards Philips/Norelco hold the top position on the world market of electric menshavers.

This success is achieved thanks to consistent marketing management and continuous product innovation.

According to the author a most interesting history that should be saved for the future.

The database is a reconstruction, mainly based on private material and recollection of the author.

Sources are Philips documents, promotional material, product analysis, information from collectors.

Careful attention has been paid to the accuracy of the content.

Data with insufficient 'proof' in the opinion of the author are marked with '?' or '~' (= best guess).

The author can not be made responsible for any effects of incorrect information in the text or illustrations.

All models with corresponding type numbers and many study projects up to 2007 are listed in the text book.

Product information in the years 2007-2019 is mainly limited to type numbers with basic data.

Separate index lists provide a summary and enable easy access of design groups and type numbers.

Copyright:

The author owns the rights on this catalogue, including the majority of the (digital) illustrations till **1994**.

Old data cannot be verified by Philips due to lack of historical documentation on shavers.

Some pictures are reproduced from Philips documents or are supplied by private collectors.

For the period 1994 – 2019 Philips Drachten served as major information source.

Progress of database and catalogue is continuously shared with Philips during these 25 years.

Contents of the catalogue/diary

All data are arranged in a chronological sequence and divided in the following main categories:

- I. Rotary Action men and women shavers, shaving heads, accessories, sales and study projects.
- II. Philips vibrafoil shavers, hairclippers and beardtrimmers, Ladycare products.

Typenumbers of products are combined in relation to their basic design or characteristic.
Each designgroup¹ is arranged in accordance to the first year of introduction or study.

Each of the 4 year sections for Rotary Action shavers represent a specific Rotary highlight.

- 1936 - 1952: Market study, development and marketing of **1-head** designs:
 - 1936 start of market- and product study of electric shavers in USA.
 - 1939 introduction of the 'cigar' design.
 - 1947 'steelbeard' model.
 - 1948 single head 'egg' design.
- 1952 - 1966: Philishave and Norelco **2-head** models:
 - 1952 design 'egg' doubleheader with standard small shaving head.
 - 1958 'pipe' model.
 - 1959 shaver design with large 'floating' heads. 'Microgroove'.
- 1966 - 1990: Marketing **3-head** models:
 - 1966 'boat' 3-head model and first rechargeable/mains doublehead shaver.
 - 1970 shaving head with 90 slots. Introduction of the Philips vibrafoil shaver.
 - 1975 TH design.
 - 1978 first fully electronic RC/AC model.
 - 1980 Double Action Lift & Cut system.
 - 1983 mains shaver with electronic power supply.
 - 1985 electronic RC/AC shavers. Introduction Philishave Tracer.
- 1990 - 2006: New Rotary Action era in design, function and promotion.
 - 1990 organic design, 'emotional' promotion (The man inside).
 - 1995 HQ type numbers.
 - 2006 End of the Philishave trademark.
 - 2007 May 9th celebration of 500 million Philips Rotary shavers sold since 1939.

Additional chapters:

Philips (and Carintic) vibrafoil shavers. Limited to the period 1949 – approx. 1984.

Philips and Norelco beard trimmers (including accessories) and hair clippers from 1958 – 2004~.

Philips and Norelco Ladyshave and other epilation products for women in the period 1939 – 2004~.

The catalogue/diary consists of 203 text pages with separately 119 combination picture sheets.

Appendix (separately):

Index of type numbers in chronological and alphanumerical sequence **1939 - 2019**. PDF.

Product specifications of typenumbers in chronological sequence **1939 – 2019**. PDF.

¹ **Design group** = Titel with short design description of the related model and its first introduction year.

All typenumbers with the same (design) characteristic are concentrated in this group.

This selection is a personal choice of the author.

Energy source: RC = rechargeable, AC = mains operation, DC = direct current.

introduction codes: m = marketing start, p = production start, s = study project.

shaving system = number of shaving heads + typenumber or product category.

Alphanumerical = numerical sequence in the groups 7xxx + SC, HP, HS xxx, HQ, HS xxxx, RQ.

History of PHILIPS '*Rotary Action*' shavers

Catalogue of Philishave and Norelco shaving & grooming products

PRODUCT – PRODUCTION – PLANNING – PLACE – PROMOTION – PEOPLE – PERIPHERY - PUZZLE

Yesterday's success = the inspiration of today = the progress of tomorrow.

USA, the cradle of electric shaving

1918

Jacob Schick², successful in razor blades, has a vision to liberate men from the wet shaving evil.

1926

'Colonel' Jacob Schick sells his invented 'magazine repeater razor' to Eversharp inc. This company obtains the right to continue with the brand-name Schick for razor blade products.

1928

First working Schick shaver with patent on this oscillating electric clipper system.

1930

Introduction of shavers with pull cord and spring winder.
The company Schick for electric shavers is founded.

1931

Introduction of the first electric shaver in USA as 'Colonel Schick'.

1934

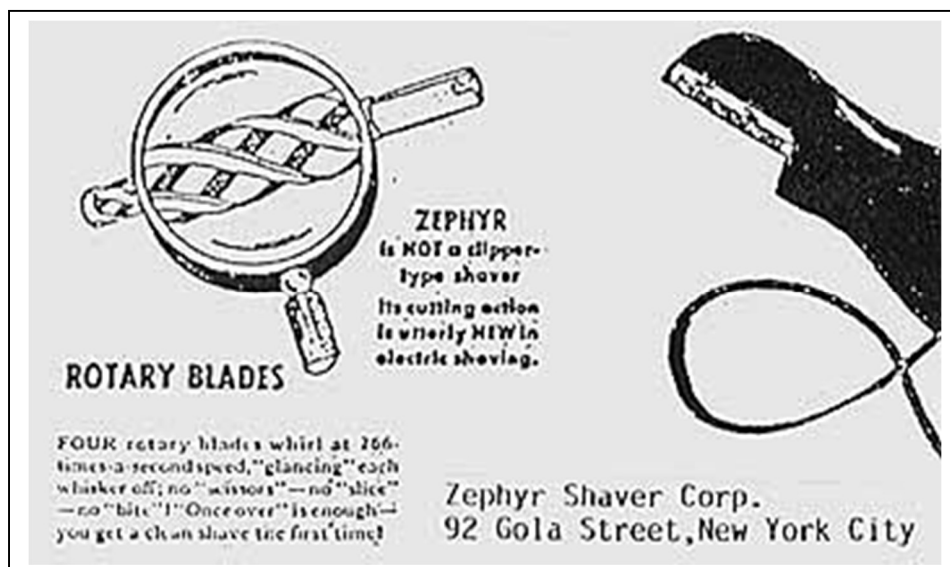
Agreement Schick with Remington and Sunbeam to exchange patent rights on limited scale.
Sales USA 76.000 shavers.

1935

Still only 2 competitors for Schick: Hanley Clipshave and Packard Lectro-Shaver.
Sales USA 220.000 shavers. Schick sold 1.5 million shavers in USA since introduction.

1936

Still only 2 competitors for Schick: Hanley Clipshave and Packard Lectro-Shaver.
Shaver sales in 1936 in USA 723.000. Schick is sued for creating a monopoly on basis of patents.



Cover of Dutch Schick instructions for use in 1939. Zephyr shaver 1938 as used for the Philips Rotary shaver prototype.

² Jacob Schick had one hobby = Razors and 2 worries: Taxes + Death.

The taxes he escaped by taking himself and his shaver-built fortune to Canada.

This action triggered US government to change the tax law. He died in 1937 at the age of 60.

The electric shaver market in USA and Europe

1937

USA³: Total sales 1.5 million shavers, value \$ 20 million. Average price \$ 15.-

Total potential market = 40 million men.

Total consumer wet shaving expenditure \$ 80 million, divided into:

Razors and Brushes each \$ 5 million, Blades \$ 50.- And Soap/Lotions \$ 20 million.

The majority of men shave sporadically or frugally (old razors/hand soap), spending \$ 1.- per year.

Few men shave every day, changing blades every 2/3 days, buying cosmetics, spending \$ 10.-/year.

In this category electric shavers withdraw possibly \$ 20 million a year from the wet shaving industry.

Schick:

Spring 1937: U.S. Court of Appeals rules that Schick Dry Shaver inc.

'Did not have a monopoly right, by virtue of its basic patents, on electric shaving'. (judge was bribed).

The effect is disastrous. One competitor after the other enters the USA market in the course of 1937.

The first three companies are **Ray** Inc, **Motoshaver** Inc, en **Nicholl** Inc.

Chicago Flexible Shaft Co. introduces the **Sunbeam Shavemaster**.

Utility Instrument Co. produces an electric shaver under various brands for Macy, Sears, Roebuck.

General Theatres Equipment with a special rotary system, sold as **Zephyr**.

Remington Rand introduces the **Close-Shaver**, subject of a new allegation by Schick.

Further introductions by **Miracle** Dry Shaver Corp, **Electric Razor** Corp. in Chicago and

Knapp Dry Shaver Corp. in Long Island City,

Singer Shaver Corp. in Newark (indirect connection with Remington).

Crescent Manufacturing Co. in Fremont, **Ronson** Products Inc. in Newark,

Kluge Manufacturing Co. in Racine.

Finally end 1937 or early 1938 **Roto-Shaver** Inc. in New York City with a rotary action foil system.

Zephyr with a unique shaving system = long spiral rotary cutter. Price Zephyr US \$ 15,00 = 1937.

Promoted by Zephyr Shaver Corp. New York in advertisement as:

'Rotary shaver' is not a clipper-type shaver. Its cutting action is utterly new in electric shaving.

Four rotary blades whirl at 266-times-a-second, "glancing" each whisker off.

Once is enough, you get a clean shave the first time.

1938

Schick:

The Court judgement in 1937 caused an outburst of approx. 40 shaver brands within one year.

In appeal it can be proven that the judge was bribed.

Schick retains the patent rights, but meanwhile lost the grip on the market.

Gillette introduces an electric dry shaver.

Other razor blades companies are planning to follow.

There are 2 million electric shavers in use, 1 million abandoned.

Europe:

Schick exports to various countries in Europe.

Sales in 1937 amount to 25.000 shavers in Gt. Britain, with a target for 1938 of 100.000 shavers.

Sales of electric shavers in Holland are very limited due to the high price of Dgld. 37,- / 40,-

One model is introduced at Dgld. 14,50.

A few manufacturers start limited production of electric shavers in Germany and Switzerland.

³ Source a/o: Fortune magazine First half 1938, pages 71 and 72.

Success has many fathers, failure is an orphan

The fact that **ir. Alexandre Horowitz**⁴ is widely honoured as the Philishave godfather, perfectly illustrates the history of Philips as a technically driven company.

No doubt, mr. Horowitz and assistants (**Lex van Dam** a/o) fully deserve the credit of having developed the most successful Philips product ever!

But this excellent product would never have appeared on the market without the efforts, skills and pressure of (forgotten) commercial members of the Philips crew.

Persons like A. Thomann, Chris Dankers and many others deserve being saved from oblivion.

A. Thomann ~1889 – 1939/11/11

From historical research it can be concluded that A. Thomann⁵ is the driving force behind the initiation and start of the Philips shaver activities in the years 1936 - 1939.

He moves in 1929 from Splendor in Nijmegen to Philips Lighting, division "S" in Eindhoven.

He contributes substantially to the development of a mechanical dynamo torch ('knijpkat').

According to his daughter he tested dynamos at home on a home trainer/bicycle.

Fall 1936 he injures his leg on the railway station in Dresden after visiting a fair.

This accident brings him in contact with Dr. Elink-Schuurman (physician, skin specialist).

For several months they both test all electric shavers he brought from a business trip to USA in 1936.

His efforts and marketing plans finally result in the green light for the Philishave start.

At the end of 1939 A. Thomann turns ill.

Anton Philips leaves for USA on 11-11-1939. In the morning he visits Thomann with a fruit basket.

Initially mr. Philips intends to be accompanied by Thomann because of his shaver knowledge.

In the course of that evening A. Thomann dies of an embolism and heart attack, 50 years old.



A. Thomann summer 1939.



Alexandre Horowitz

Christiaan Jacobus Josephus Dankers. (Source: Philips Koerier 27-2-1960)

Chris J.J. Dankers starts at Philips Lighting on 3-5-1927. Active as 'secretary' of A. Thomann.

Famous for shaving personally hundreds of men with Philishave 7730 at the introduction in a shaving bar and on the Fair in Utrecht, repairing the demonstration shavers during the night.

He is inventor of concentric shaving heads on the Philips patent application March 1942.

Moves to the Dutch Sales organization 'Philips Holland' as sales manager Philishave.

On 28-8-1959 he starts an independent shop for electrical appliances at the Coolsingel in Rotterdam.

⁴ Ir. Alexandre Horowitz is born in 1904 at Antwerpen. After his study at the Technical High school in Delft he joins Philips from 1929 till 1948. He dies in 1982, as professor/inventor with 150 patents on his name.

In the factory of Philips Drachten a sculpture of Alexandre Horowitz, made by the artist Hans Mes, is displayed.

⁵ Source: Letter of mrs. M.A. Hagendoorn – Thomann dated 22-2-1994 with picture. Answered by Bram Porrey.

Philips shaver studies

1935

Philips is scratching the surface of the shaver market with the introduction of a razor blade holder. This item is produced by the Philips Philite factory for plastics in Eindhoven.

A black version in Philite box with and without PHILITE trademark is sold in 1935.

Given free by company Globe in the Netherlands with purchase of razor blades at price of f 1,-.

Carton box with Globe symbol. Bordeaux red (maroon) version in the early forties.

First signal of interest in the subject electric shavers at Philips Eindhoven in 1935/1936.

1936

A. Thomann is one of the first Philips persons with a business interest in electric shavers.

On a trip to USA he takes a suitcase with electric shavers home for further research.

Together with Elink-Schuurman (physician) he is testing them for months during winter 1936/1937.

Simultaneously Ir. Alexandre Horowitz starts shaving with an electric shaver end 1936/early 1937.

Initially electric shavers in USA are based on the oscillating system with important disadvantages:

- high levels of skin irritation, vibration and noise
- continuous interruption of the cutting action due to the oscillating cutter movement
- only linear movements of the shaving head over the face will effectively catch beard hairs

1937/1938 three models with rotating shaving systems appear on the USA market:

Roto-Shaver, round foil with holes. J.B. Williams Company. Price \$ 13,95.

Ronson Rotary foil. Patent US 211 92 84 and DES 109384.

Zephyr with rotating motor and a cylinder rotary shaving head + cutter with 4 spiral blades.

The Zephyr and Roto-shaver are included in the studies. For the first working sample A. Horowitz combines in 1938 the body of the American Zephyr with a prototype of the new rotary shaving unit.

1937

October 1937 mr. Arie Vernes (office Graner, sales of Philips products in USA) writes a letter to the Philips management in Eindhoven with a request to add electric shavers to the product line.

A proposal to start with (purchased) shavers is rejected by ORCO = PHILIPS top-management.

In the course of 1937 A. Horowitz succeeds in developing a superior shaving system composed of a round rigid guard with slots and a rotating cutter with major advantages:

- low levels of skin irritation and noise. No vibration. Continuous cutting action.
- short and long hairs are caught effectively in the slots, which are open at both ends.
- the shaving head can be moved over the face in any direction.

1938

Mr. Thomann has finished his marketing plan and reports in May 1938:

Shaver samples of various brands ordered in USA have arrived via Lopez Cardozo.

Advice not to buy shavers for sale under PHILIPS brand as margins will be too low.

The market potential is interesting for Philips. Our new shaving system is very promising.

The experience with small motors in the Philips Radio Factory is an advantage for own production.

Patent situation under study by Ir. Hijmans.

Ir. Horowitz claims that his design does not infringe other patents and can be patented on its own.

He expects to construct some working samples for a budget of f 2.000,-

Estimated cost price f 4,50 based on the sale of 50.000 shavers in the first year.

A sales price of f 17,50 will provide a net profit of f 125.000.

December: A new marketing plan is presented, based on lower cost price and sales price f 19,50. The request of Mr. Thomann for permission to continue with the shaver research is granted by the ORCO on condition that the proposed name Philishave will be replaced by a better one⁶.

Preparations to make 100 samples for user-test. The opinion of these consumers will be decisive.

Working models in 1938 used by 10 persons.

⁶ As an alternative the name **Phi-garo** is proposed, but rejected.

The name combines the relation with Philips and a hint to the barber in the opera 'Barber of Sevilla'.

1938 - 1949

Study project rotating/oscillating shaving unit

1938

'Planetarium' Principle to rotate or oscillate shaving guard or complete shaving unit.

Unit rotating with low speed at 40 - 120 r.p.m. filed for patent by Philips in November 1938.⁷

Oscillating movement (100/500 cycles/minute) claimed as improvement February 1939.

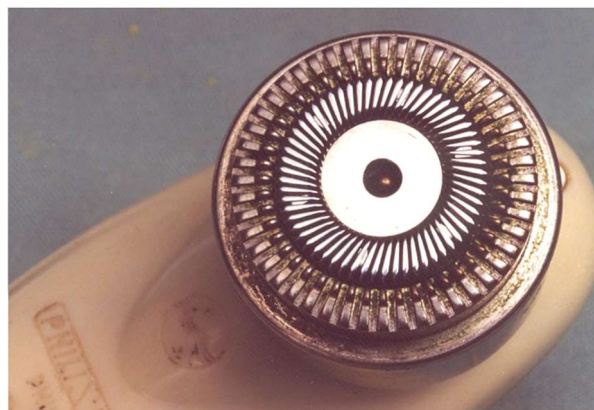
Samples found of single header versions on body of 7733 and 7735.

7733 > Maroon housing. Handmade unit construction with shaving head 7757, produced 1948.

7735 > Ivory housing. Handmade unit, head 7757, produced 1946. Ring with long static entry slots.

Unit construction and metal protection cap of both models basically identical.

Samples probably made around 1948/49.



1939 - 1968

Mains adapters for international use of shavers

To enable worldwide use of the Philishave models, **AC (mains) adapters** are sold separately.

At the start the standard black versions as used by the Philips RGT department for radios, etc.

In 1939 round brown and black adapters for Audio equipment. In 1940 new modern design.

After some years special versions in medical white colour are made for shavers.

In general a complete set of 4 adapters is supplied. Price Holland in 1949 = f 4,50.

Germany price in 1956 = DM 4,80. Price of individual adapter in Holland = f 1,25 in 1959.

Incidentally for certain destinations one specific adapter is packed with a shaver.

The following type numbers are specified.

7942 Edison screw-connector = 'A'-plug adapter.
7942A white colour.

7943 Swan bayonet-connector = B-plug adapter.
7943B white colour.

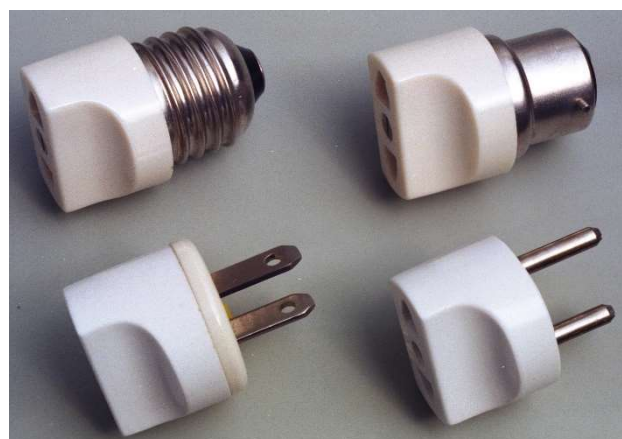
For UK a local version is bought as well.

7944 UK round pin-connector = 'C'-plug adapter.
7944C white version. 7944C/01 'Made in Holland'.

Initially designed to fit British sockets.

Applied to convert USA plugs to European sockets.

7945 = USA flat pin-connector. = 'D'-plug adapter.
7945D = white colour.



⁷ Dutch appl. rotary movement 95826 filed 9-11-1939, priority 10-11-1938 (Germany). Patent 53921 dated 16-01-1943. Patentschrift Deutsches Reich Nr. 718390 patentiert vom 11 November 1938 an. UK patent 533,467 priority 11-11-1938. Patentschrift Deutsches Reich Nr. 694507 (PH 6715) 24-02-1939, published 2-08-1940 = oscillating movement. Dutch application oscillating movement 97027 filed 22-02-1940, priority 23-02-1939 (Germany). Patent 59579=16-01-1943.

Era of singlehead rotary shaver designs 1939 – 1952

1939 = 'cigar' design. 1947 = 'Steelbeard' and 'mouse' 1948 = 'egg' design.

1939

Start of Philips Philishave marketing**1939**

Early 1939 the final decision is made to introduce the new 'cigar' shaver as PhiliShave type 7730. Presentation at the Spring Fair - Utrecht on 14-3-1939 with 12 provisional samples. Demonstrations during the day, repairs at night in a hotel room. Orders for 8.000 shavers. A contest for the best slogan results in 2.833 suggestions. The winner is Th. A. Herman. Selected slogan: 'maar een PhiliShave scheert beter' (= 'but a PhiliShave shaves better').

7730 first version: 17 mm head, 48 slots, 12 dust removal holes, no skin stretching rim. Equipped with 3-blade bronze triangle shape cutter replaced by a disc shape by the end of 1939. The housing is black, with a recessed slot to store the shaver in a **wall holder** made of steel wire. Light brown soft leather pouch with carton sleeve insert and one push-button with Philips stars. (Followed by many variations in packaging). Production start Summer 1939 in Eindhoven. Official introduction in the Netherlands at the Autumn Fair in Utrecht on 20-09-1939.

1940

A major improvement is the introduction of a skin stretching rim⁸ on the Utrecht Fair 9-14 March. Start of study for a larger shaving head with 1-slot coupling. Prototypes on body 7730 and 7733. Bronze cutter replaced by steel spring 1940. Production start 6-blade cutters end of 1940. Total shaver production with 3-blade cutters is estimated at 30.000 bronze and 60.000 steel.⁹

PHILISONG NUMBER ONE*The Ballad of the two Chess-Players*

*They're stubborn players, these two men,
But Lord! When will they shave again?*



*The game goes on, for nights and days,
Their beards grow in most funny ways!*



*Soap, blades and razors they refuse,
Whilst over master-strokes they muse.*



*No words, no threats, no pray'rs will get
Them to the barber's shop, I'll bet.*



*But lo! What is approaching here?
The famous PhiliShave, my dear!*



*Now they can shave without a scratch
Not interrupting their brain-racking match.*

Now not all of us are players, but some of us are stubborn just the same. Men, be men. Kick those razors out of the bathroom and bury the blades in the backgarden and use the shaving soap to let old ideas slip down the stairs with a bang. Get a PhiliShave and get it quick. For every minute without this man's bliss is paid to the full in bad morning tempers, court plaster, time, burning faces and trains that won't wait for the man who is late.

⁸ Invention to reduce skin irritation.. Patent application by Jan de Groot nr. 96652 on 20-1-1940.

⁹ Production quantities and modification dates are based on a personal reconstruction of the author.

Philishave 'cigar' type 7730 and shaving head 7751

Initially (in the period before introduction) the shaving heads had no centring hole in the guard.
Presented at Spring Fair - Utrecht March 14, 1939 with 12 working models. Orders 8.000 shavers.
(Separate round transformer 220/110 V for demo?) Market introduction 1939/09/20 Fair - Utrecht.
Production estimate based upon personal calculation of Bram Porrey:
production all versions with bronze cutters: approx. 30.000 shavers. Total 7730 = ~ 90.000 shavers.

Inscriptions, type shaving head + packaging variable due to running changes.

Inscriptions missing on initial versions. Samples of 3 variations

= no Philips, Philishave nor type number.

= Philips and Philishave, but no type number.

= Philips + type number, but no Philishave.

Plug with 2 resistors + voltage selector. Voltage settings: 120 / 165 / 225. Solid black rubber flex.

The first shaving head type **7751** in **1939** has a diameter of 17 mm and 48 hair catching slots.

Cutter speed on shaver up to 10.000 rpm.

Guard with 12 holes mid-side for beard-dust removal, variations in size of holes.

Lamellae thickness nominal 100 μ (specified 80 μ ?). Radial position towards the centre of the guard.

The slots are 0,28 mm wide, length 2 mm, V-shaped entry.

The 3-blade cutter is made of bronze that has a low friction and can be machined easily.

The 3 contact points allow relatively high tolerances on the flatness of blades and guard.

But after a while reactions of consumers point at the fact that bronze is not the ideal choice.

The blades turn blunt quickly and break easily.

The initial triangle shape is succeeded by a disc design, production ~November 1939.

Replaced by a **steel** cutter as running change spring 1940, same round disc-shape with 3 blades.

Other complaints relate to severe skin irritation.

To reduce the skin irritation a skin stretching rim is added. (Dutch patent 56734, application 20-1-1940).

Running change ~1940/02, same type number 7730. Initially still with bronze disc cutter.

Presented at the Spring Fair in Utrecht 9-14 March, 1940.

April 1940 recommendation to Philips employees owning 7730 to buy this skin stretching rim.

After introduction skin stretching rim position of holes changed to lower side of guard.

Position of holes varies between 5,0 and 1,5 mm above flange. Holes deleted approx. 1946.

Samples of guard with 12 holes lower side for beard dust removal. Produced in 1940 and 1942.

Versions specified:

7751/00 = Bronze disc cutter, 3 blades. Produced for a very short period end 1939 till early 1940.

7751/01 = Steel disc cutter 3 blades.

7751/06 = Guard with and without dust holes, turned disc cutter, 6 blades. Production start 1940/11~.

Service = Wrapped in silk paper, packed in single slide carton, black print of drawing cutter + comb.

No type number on pack.

Production of shavers with 7751 type shaving heads terminated probably around 1948.

Production 7751 for service till ~ 1955 ? Supply 7751/06 for service 7730 & 7736 till early sixties.

Shipments service 7751 >

1945 = 7.000, 1946 = 30.000, 1953 = 33.000. Total 1945 - 1953 = ~300.000 heads.

Estimated production of version with 3-blade steel cutter 60.000 shavers.

End 1940 / early 1941 change to 6-blade cutter, type number 7736 = Philishave "6".

Price 7730 in Germany Spring 1940 = RM 45,00.

Introduction 7730 in France 1940.

Shaving head guard study > Lamellae at outside entry thicker than at centre of guard.

Preferably gradually reduced from 0,11 to 0,06 mm.

Variations: Size of slots or holes. Separate cutter for thinner inner circle.

Promotion for use as **ladyshaver** in documentation and instructions of 'cigar' model 7730 in 1939.

Lady study project ~1941: 7730/7736 with gilded shaving head and holder (skin stretcher version).

Guard 17 mm. 48 slots with 12 holes low position at flange for removal of beard dust.

Miniature grinding stone unit for manicure.

Philishave 'cigar' design types 7736 + 7741

Improved production techniques allow the increase to 6 blades end **1940**. Type version **7751/06**.
 The 6 blade version reduces the problem of 'cutter jumping'.
 Used on shavers till 1948, service till early sixties. Sales 1945-1953 approx. 300.000 service heads.
 Introduction of this 6-blade cutter approx. February 1941 on Philishave "6" type **7736**.
 At start shaver marking still **7730**, sculptured red label with '6' emblem glued on lid of carton box.
 Dust cap chromium plated. In 1947 black lacquered protection cap.
 Red brown linen pouch, weaved sisal + paper 'string' pouch.
 7736/10 = leather zipper pouch, wooden brush. Final version. Carton box red, shaving man and '6'.
 Production level 3000 shavers/week in 1941.
 Planning for 1942 = 8000/week, which would require 150 additional employees.
 In the years 1943/1944 the production is concentrated at a location in Vught.
 Target 1.500/week, but the output is very low and variable due to restrictions and lack of material.
 Total production in the year 1944 approx. 6000 shavers.
 Total production 1939 till May 1945: 330.000 shavers.
 Production in Eindhoven 1945/05 - 1946/04 = 107.000 shavers. Summer 1946 = 3.400 shavers.
 Production of 7736 in Holland is terminated end 1946. Location moves 1946 to Zwolle.
 Production **500.000** shavers since 1939 celebrated November 13, 1946 with 'silver six' version 7736.
 Assembly 1946 in Sweden 12.500.
 Production/sales activities in Denmark 1941/02 - 1947.
 Switzerland introduction 1942, sales 358 shavers. Sales in 1943 = 1641, in 1948 = 2233.
 Action in Holland with trial shavers, engraved "Bruikleen App. + company".
 Registered versions in German service documentation are 7736/00, 7736/02, 7736/19, 7736/22.
7741 as 7736 with motor for 6 - 12 Volt DC to operate from car-battery. Specified 1944/11.

Milestone 1941:

Glass saucer with 7736 shaver to celebrate 100.000 shavers 7736 produced.
 Etched text: *Sept. 9, 1941 = 100.000 shavers PHILISHAVE "6" produced in Eindhoven*
 One? sample produced, probably by Kristalunie in Maastricht or Koninklijke Glasfabriek Leerdam.
 This glass saucer + original shaver (7736/10) was transferred by C.M. v.d. Put in 1975 to Bram Porrey.
 May 1994 with 7743 Groene Draeck on loan to Rijksmuseum Amsterdam by B. Porrey for exhibition.
 Glass expert Rijksmuseum Drs. W. Ritsema van Eck showed much interest.
 Letter Prof. Dr. W.H. Vroom 'Directeur Hollandse Geschiedenis' NG 94.2473 – 1994/05/18 to
 Bram Porrey, confirming agreement. At 2003-10-13 letter of extended storage till 2008 by director
 Dr. J.P. Sigmond, inventory nr. NG-1995-1-1 en -2. Not used for display due to reconstruction of building.

Promotion:

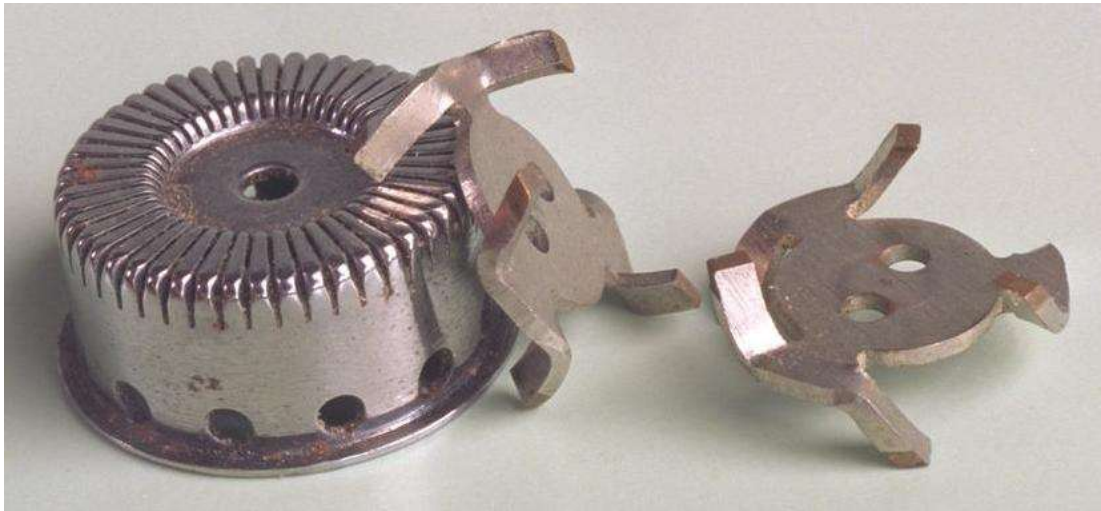
Glass wall plate Philishave 6 drawing + text silver on black. Wall mounting in shops.
 Back side marked with white paint: "Eigendom NV Philips Gloeilampenfabrieken".

The first promotional **movie** for Philishave **7736** is made approx. 1943 by Joop Geesink Studio.
 Animation with dolls by studio Geesink Toonder, music Hugo de Groot. Titel 'Phi-garo in the Woods'.
 The 'hero' (7736) **Phi-garo** is a badly shaven gnome, laughed at by an elf.
 He visits a barber who shaves his beard. But the elf is still not satisfied.
 It takes a visit to a modern barber, using an electric Philishave, to achieve full satisfaction.
 Other promotional movie productions by Studio Geesink for Philips (Light) are:
 'Serenade Nocturne', 'a Sun is Born', 'Looking for a Job'.

Studies two-sided cutter

In the year 2000 a collector buys a box with Philishave parts on a flea market. The box contains a/c a cutter with 2x3 blades, 3 facing up, 3 down. The cutter fits the 7730 shaver. The cutter relates to a Philips patent application of 14-01-1940, titled 'cutter with spare blades'. The description explains that Philishave blades are self sharpening and long lasting, but vulnerable and often upside down replaced after cleaning. This results in breakage of blades and coupling pins. Due to the self sharpening feature, the cutters have to be replaced as assembly including guard. The steel cutter, 6 blades and slot coupling make the invention superfluous.

A new patent application of November 1942 for a similar reversible cutter serves a different purpose. The protrusion of the skin in the slots depends on the width of the slots and thickness + rounding of the lamellae. With equal pressure a thin supple skin will protrude deeper than a thick skin. A standard version is always a compromise and never can combine maximum closeness for a thick skin with absence of skin irritation for the sensitive skin. The invention aims at a solution.



1941 Philishave study of doubleheader type 7734

Type **7734** officially specified as 'Super Luxe model', most likely the study of a doubleheader. In 1941 Mr. A. van der Lee, colleague of Lex van Dam, made a working sample of a 2-head shaver. After presentation (illegal) permission was granted to produce 6 more samples. One sample is used by Frits Philips for several years. The project is considered to be a preparation for after-war activities. Specification June 1943 = Transmission 1:2,3. Motor speed 8.000 rpm. and cutter speed 3.500 rpm. Rotor rotates anti-clockwise [= left direction]. Sample with shaving heads width of slots 0,28 mm. Continuation in 1945/46 with modified design, not produced. Postponed till intro 'egg' design 7743. Reasons for delay a/o lack of capacity to produce sufficient quantity of shaving heads.



Emergency solution #1 = 'Steelbeard' 7733.

After the war Philips feel an urgent need for a new shaver model and select the 'egg' design 7735.

The appearance is very attractive and the shape seems to be ergonomically perfect.

The new motor, transmission and other components, however, require a long preparation time.

From previous development a modified stick model with larger shaving head is available.

This design is now reluctantly selected as an intermediate solution to revive the shaver sales.

Type number **7733**. Final nickname '**Steelbeard**'. Production start 1947-02-20.

Introduction 1947 at Autumn Fair Utrecht.

In demo stand with 5 mirrors more than 4.000 visitors are shaven.

Larger shaving head 19,5 mm, 60 slots, 6-blade cutter, 2-pin coupling (1-slot coupling in 1950).

Cutter spring pressure increased with 30% compared to 7736 = now 22,5 with minimum 17,5 g.

Oil pad in dust cap, to be removed before use as oil + shaving dust (iron particles) are abrasive.

Colour versions maroon (chestnut or Bordeaux red), black and ivory.

Packaging in numerous variations. Leather & linen pouch & carton display box.

Carton boxes: Blue/red with 'Staalbaard Standaard' [Holland].

International version red brown, neutral with trademarks.

Specials: Brands in France 'Raselis' and Radiola. Inscription for airline companies.

Due to lack of material during and after the war, the pouches are produced in numerous versions.

In France a special version of the 7733 is sold in ivory colour under the second brand **Radiola**.

For the brand **Raselis** (Coutelier shops in France) the 7733 is visually modified.

Samples 3x Sierra shaver ready 1949/01.

At end of production period, probably September 1948, square plug with smooth rounded corners.

In 1949/1950 the Steelbeard is modified for production standardisation reasons (version 7733/13).

The new modern resistor plug of model 7735 is added and the cutter with 1-slot coupling is adopted.

Production 1947+1948 = 168.000 (with ozone holes from mid-1947). Factory cost 1948 = f 13,45.

Production Holland 1946/47 = ~50.000, 1947 = 85.000, 1948 = ~ 50.000, 1950 = 40.000 shavers.

Start Eindhoven, via Zwolle to Roermond in 1948. Final production in 1951 = 6.000. Total 222.000.

Production in Holland of version with square plug at least 175.000 shavers.

Production stop of 7733 in Holland in 1950. Local production or assembly in many countries.

Versions of Philishave 'Steelbeard' type 7733

7733/00 first 'factory' version Bordeaux-red, one-slot coupling¹⁰ and resistor plug as for 7735).

7733/01 as 7733/00 Bordeaux-red colour, square plug of 7736, 2-pin coupling. No packaging.

7733/02 as 7733/01 but with mono voltage trade plug. Basic version, no packaging specified.

7733/03 as 7733/01 black. Square resistor plug 7736, no packaging. Production Holland.

7733/05 as 7733/01 maroon in leather pouch.

7733/06 as 7733/01 maroon in linen pouch.

7733/07 as 7733/03, leather pouch.

7733/08 as 7733/03 black in red brown linen pouch, pushbutton. Sold a/o in Austria 1950/51.

7733/17 specified 'oxblood housing', new plug 'egg' type 7735, no pouch. Similar to 7733/01.

7733/50 as 7733/01 mono 220 V, standard trade-plug for South America.

7733/55 as 7733/50 in leather pouch.

7733/51 as 7733/01, but mono-voltage 110 V - 60 Hz, moulded American plug. No pack.

7733/56 as 7733/51 in leather pouch.

7733/52 as 7733/01 mono 110 V - 60 Hz, moulded plug for USA. White housing. No pack.

7733/57 as 7733/52 in leather pouch.

7733 K as 7733/01, but USA plug. 110 Volt 60 Hz. Specified 1949/09/16.

7733/16 Final version. Maroon shaver and plug, black plastic flex. Round plug of 7735.

Start Autumn 1948. Individual numbering of the shavers starts again from zero.

This version is introduced in Holland simultaneously with the introduction of 7735 in 1948.

Both types packed in same carton display box without wallet. Arguments Philips to delete user pack: 'Most buyers do not use the leather zipper wallet and the lower price will stimulate sales'.

¹⁰ One-slot coupling is introduced on 7737A in 1947. Model 7733 follows shortly before end of production.

Study¹¹, second brands, local production, miscellaneous

Holland Sales till end 1948 = 118.000 shavers type 7733.

Production 1949 in Holland only for local market = 30.000 shavers 7733.

Others Norway sales 18.000, rest Europe 23.000. Others 7.000 shavers.

Austria Sales start 1948/49 = 6.500 shavers. UK = start 1949/09,

Denmark Assembly 1947 + 1948 = 16.000, sales 7.500 shavers. Sales till end 1949?

7733L Specified 1946/11, maroon, modified 28 Volt motor for KLM = Royal Dutch Airlines.
KLM = Royal Dutch Airlines emblem 'hand engraved' in shaver housing.
Promotion for passengers use on various airlines. Sample 'SWISS AIR' in file.
In 1949 all long distance KLM planes are equipped with Philishave 7733 shavers.
Shaver 7733 is used on marine vessels and in trains as well.

Germany Production starts 1949 = 40.000 shavers, sales 4.500.

Price in 1950 of shaver without packaging = DM 48,-. Price leather pouch DM 7,00.

In 1950 final production Germany = 34.000 shavers.

France Local production (motor) **7733** from 1947/11 till 1948/10 = 52.000. Sales 37.000.

Plan 1949 = 80.000. Level 1950 = 200.000. Final production 1952 = 11.000.

Total production all 7733 versions 1947-1951 = 540.000 shavers.

Black 7733 made in France, local trade plug 2 versions.

Accessory resistor adapter 110 > 220 Volt. Soft leather pouch, pushbutton strip.

Mould for housing (cap) in France visually different from production Holland.

RADIOLA version with **ivory** urea housing for France. Mono voltage with flat Radiola branded plug.

Long narrow blue textile pouch with zipper. Leather brown label with gold Radiola on side of pouch.

Sales Radiola recorded in 1946 production Drachten. Philishave version specified as well.

RASELIS = modified housing, sharp circular segments. Dark Bordeaux red.

Soft suede light brown push button pouch. Sales in 'Coutelier' shops France.

Raselis mentioned in Drachten records in 1946.



Type number **7502**

Wall holder for 'Steelbeard' model.

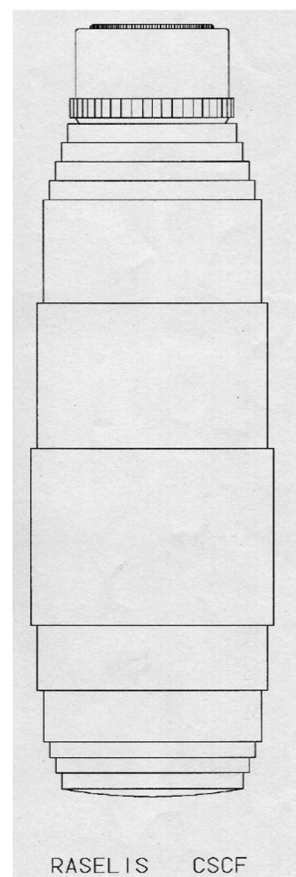
Provision to hold shaver plug.

White lacquered die-cast aluminium.

Price Holland 1949 + 1952 = f 6,25.

Promotion in Holland 1949 to place a wall holder in hotel rooms.

*Raselis drawing >>
Reconstruction by private collector H.N.*



¹¹ Many study samples of 7730/7736 body with modified holder adapted to 19 mm shaving head:

7730 body, no type number, head holder of 7735, code 8 44 61, formed cutter 7756, 6 blades, 2-pin coupling.

7730 type number, head holder of type 7733, code 4 33 50, turned disc cutter, 6 blades, 2-pin coupling.

7736 type black nr. 2 32 7 6, cotton covered flex. Shaving head 7756, code 8 . 5 1, disc cutter, 6 blades, 2-pin.

Shaving head holder interior enlarged by turning off to hold 7756 head with brass spacer ring.

7733 study prototype = project of handmade flat long body (Pertinax), shaving unit similar to 7737 and 7735

Prototype in Philips museum Eindhoven. Probably produced around 1942.

Promotion for model 7733. Norelco introduction.

The shaver 7733 is introduced and demonstrated fall **1947** at the fair in Utrecht.
 Display of a man-size shaver 7733 (height 1,5 m) and a mascot Mr. **Beardmore**. Publ. Waves Nr. 3.
 In **1949** a large number of smaller mascots are made for display in shops, height 50 cm.
 The hand is universally suited for the models 7736 and 7733.
 The name of the mascot is now Mr. **Cutbeard**. Source: Philips Announcer 1949.
 Finally Mr. **Steelbeard** is commonly used.

At the end of **1947** a limited introduction of shavers type **7733** takes place in USA by **Norelco**.¹²
 Versions in both maroon and in white colour are specified. Packed in a leather wallet.
 First shipment of 1000 shavers end 1947, followed by 1000 shavers early 1948. Likely white version.
 Simultaneously the shaver type **7737** with synchronous motor is introduced end 1947 in USA.
 The promotion campaign starts in 1948. Norelco sales till end 1948 = 2.500 shavers.
 Total market USA in 1948 = 1.65 million shavers, dominated by Schick, Sunbeam and Remington.
 Norelco sales in 1949 = 15.000 shavers through 25 large dealers from coast to coast.
 Promotion expenditure Norelco in 1949 = US \$ 28.000,-. Sales price USA \$ 22,50? In 1949.
 Statistics of total Norelco sales menshavers USA > 1948 = 2.500, 1949 = 15.000, 1950 = 30.000.

1947

Shaving head 19,5 mm, 60 slots, 2-pin coupling type 7756

Beard hairs must be caught and cut several times to achieve maximum closeness.
 The more hairs are caught with each stroke of a shaving unit, the faster this result is performed.
 An increase of the number of slots in a Philishave head is one of the first options.
 Development of a larger head with 60 slots for improved hair catching starts already in 1941.
 Introduced on Steelbeard shaver type 7733 in 1946/47.
 Type **7756** = Guard chrome steel, diameter 19,5 mm. Rim at side of guard, 60 slots width 0,28 mm.
 The slots are sawn visually 'clockwise' = in direction left from the centre of the guard.
 Cutter with 6 blades, 2-pin coupling.
 Initially with turned disc cutter. Changed to turned cutter with 'open legs', produced in 1950.
 Replaced by formed cutter for final replacement sales.
 Shipments replacement heads 7756 > 1947 = 90.000, 1955 = 22.000 (final).
 in the years 1947 – 1955 = approx. 600.000 shaving heads. Sales price Holland in 1955 = f 6,00
 7756/00 head/cutter with turned cutter type, without packaging. Production ~ 1946 till 1949.
 Initially with turned disc type cutter. In a/o 1950 turned cutter with 'open' cutter blades.
 7756/10 as 7756/00 turned cutter in plastic box.
 7756/03 as 7756/00, head/cutter assy with formed cutter, no pack. Production start 1948.
 7756/13 as 7756/03 in transparent plastic snap-box, curved lock-lid, oil pad, black print 7756.
 7756/12 Guard 60 slots + 120 holes [waved]. Turned cutter, 6 blades. In plastic snap-box.
 7756/30 Guard with 10% slots = 0,3 mm. Slot coupling. Specified in 1946
 Wider slots with same thickness of lamellae can compensate for lower specific pressure on the skin.
 This is an option to maintain optimal closeness/skin comfort balance for heads with larger surface.

Miscellaneous items 1947-1949

1947-10-20/25 Philishave Congress in Eindhoven for managers from Philips sales organisations.
 Participants: Belgium, Ireland, Netherlands, Norway, Tsjecho-Slovakia, Sweden, Switzerland.
 November 1947 start of shaver production in France.
 November **1948** start of a '**shaving saloon** in the 'Krankzinnigengesticht' at Acht (Eindhoven).
 Surveillance of the test requires permanently 2 men. Cost Dgld. 750,- per month.
 Capacity 150 full shaves per day with 21 shavers. In 14 days 100 shaves per shaver.
 November **1949**: Design for new cleaning brush required. Re-start study for battery shaver.
 Milestone of 1 million shavers sold since 1939.

¹² Norelco is probably a combination of North American PHILIPS Company + electric.

Based on an agreement with PHILCO not to use the PHILIPS brand in USA and Philco not in Europe.

1947 Animation movie mr. Easy as promotion for PhiliShave type 7733

Approx. 1947 Geesink produces the animation movie **mr. Easy** for model **7733** (150 seconds). Positioning for mr. Easy: The modern man who furnishes his house with all kind of innovations. Of course, he shaves electrically with a Philips Philishave. The movie can be used internationally as it does not require any audible text. The final slogan "You too can shave electrically tomorrow" can be delivered in any language.



Illustration: Promotional drawings for mr. Easy. Picture Philips archive C 25458 dated 8-3-1948.

1948 Study project 'hand-powered' single head shaver

1948 January 20-29 H. Heuts, Philips Physical Laboratory Eindhoven presents the prototype of a mechanically powered Philishave, based upon the 'knijpkat' = dynamo principle. Cutter powered by fly-wheel, activated by pushing handle. Principle of hand dynamo-light. Working prototype made in Physical Lab. Eindhoven by mr. H. Heuts. Memorandum 4-2-1948. More models are made (less than 10)¹³, but development of this project never started.



¹³ Moulded working product in Philips file Drachten. Two other samples known elsewhere. Interview with mr. Heuts 2005/03 did not reveal additional information. Alternative design with pull cord + patent application presented by mr. Heuts as well. Torch light 'knijpkat' idea originates from mr. A. Thomann in approx. 1937.

Emergency solution #2: the egg delivers a mouse.

As a prelude to the introduction of the 'egg', a similar design with synchronous motor¹⁴ is launched. The motor is readily available, but demands concessions to design and function.

A starting lever is required. The rotor does not run smoothly, thus affecting the cutting performance.

The type number is **7737A**. The synchronous motor does not require any interference suppression.

Mono voltage motor, separate versions for 50 or 60 HZ.

Initially designed with shaving head 7756 = 2-pin coupling (not sold?). Production with slot-coupling.

Versions with smooth and ribbed shaving head holder ring.

Type name Steelbeard Ivory, changed to Philishave Ivory. Nickname 'mouse'.

Trial production spring 1947. Production start August 1947. Sales start Autumn 1947.

The Netherlands and Belgium wait to introduce 7737 till stock of 7733 is sold (target spring 1948).

Eventually model 7737 is not sold in these countries at all.

Production Eindhoven in 1947 = 5.000, 1948 = 41.000.

1949 final production Eindhoven 16.000 (including assembly Norway). Total 62.000 shavers.

Norway: assembly 7.000 shavers in 1948. Production Australia: 1949 + 1950 = 77.000 shavers.

The production is terminated in 1951 = 21.000.

Philishave selection of specified versions:

7737A/00 = basic version 220 Volt 50 Hz without brush and packaging.

7737A/03 = /02 without plug, destination Australia. Leather zipper wallet. Start 1948

7737A/05 = /00 with brush in zipper wallet.

7737A/06 = /00 with brush in wallet with metal slide-'lip-button' closure (Dutch = 'liptas').

7737A/07 = /00 disassembled for local assy in Sweden.

7737A/08 = /07, but motor 120 Volt, in parts for local assy.

7737A/09 = /00 disassembled in Holland for assembly in Australia.

7737A/15 = basic version 120 Volt 50 Hz with zipper pouch.

7737A/16 = basic version 120 Volt 50 Hz with leather 'lip-button' wallet.

7737A/20 = version with resistor plug for 200 - 250 Volt 50 Hz and British plug for Gt. Britain.

7737A/40 = version 140 / 230 Volt with 'oval' resistor (4200 Ohm) plug of new model 7735.

7737A/45 = /40 in leather zipper wallet. Resistor plug voltage switch 110 - 160 / 165 - 225 V 50 Hz.

Norelco versions:

7737A/50 = shaver 110 Volt 60 Hz. 2-pole, Ticonal magnet rotor 3000 r.p.m. Moulded USA plug.

7737A/55 = 7737A/50 with brush in light brown leather zipper pouch with Norelco trademark..

7737A/56 = 7737A/50 with brush in leather 'lip-button' wallet.



¹⁴ In 1954 the Physical Lab. (Nat. Lab.) Eindhoven will be working on an improved design synchronous motor. Commercial Dept. does not accept such development for shavers, remembering the 7737 experience.

Shaving head 19,5 mm, 60 slots, slot coupling type 7757

7757 = 19.5 mm guard, centring rim on side of guard to fit a/o 'egg' type shavers. Guard with 60 slots. Start with turned cutter, 6 blades, slot coupling developed 1941, introduced 1947 on shaver **7737**.

The first 60.000 formed cutters type 7757 are ready August **1950**.

Production is adapted gradually, saving f 0.08.

Material shaving head guards menshavers 13 % Chrome-steel.

Ladies Poldi CNO = Chrome-Nickel, as chrome-steel in 1950 not available in right diameter.

Waved slots: 7757 = 60 slots + 120 holes. Cutter 6 blades. Full production spring 1958.

Study 3 holes per slot = 180 holes. Theory holes in slots = skin can protrude locally deeper in slots.

Holes however limit the increase of number of slots. More slots better than holes.

Prototypes on 7735. Specified: 7735/18 = 7735/00 but shaving head with 180 holes.

Other studies: 1947/11 study recessed running groove [loopgroef].

Samples found with vertically inclined sawing of slots and entry. Study or production?

Study projects drilling 120, 150, 180 holes in 60 slots. Final choice 120 holes (= 'waved' slots).

Survey of all versions with description as specified in Philips file:

7757/00 turned cutter, wide 'blade-arms', standard slots, no pack, 1947 till ~1953.

7757/02 turned cutter, guard with 60 slots and 120 holes. Shaving head without packaging.

7757/03 shaving head assy, standard slots, formed cutter, no pack, production 1949 till 1958.

7757/04 as 7757/03, but 60 slots and 120 holes, formed cutter, start end 1950. No pack.

7757/05 guard 150 holes = 5 per 2 slots, cutter track width 2,2 mm, 'outer centring'. Specified 1948.

7757/10 as 7757/00 in plastic transparent box, no lock.

White text 'Philips Philishave spare cutter guard assembly' in 1950.

7757/12 as 7757/02 in plastic lock-box.

7757/13 as 7757/03 in 2 versions transparent lock-boxes:

High box + Philips emblem and low, curved box with red print 7757.

7757/14 as 7757/04 in high transparent plastic sealed box.

7757/18 Shaving head assembly produced in Philips factory Spain.

Ladyshave versions a/o 'egg' type shavers:

7757/16 as 7757/13 formed cutter, with thicker lamellae, 180 microns.

Packed in box with label 'Ladyshaver'.

7757/17 Service shaving head for Ladyshaver, gold plated. Thicker lamellae, 180 micron.

7757/23 as 7757/03 formed cutter. With ornamental disc aluminium anodised gold-colour.

7757/24 as 7757/04 waved slots [120 holes], formed cutter.

Ornamental disc aluminium anodised gold-colour.

7723/34 as 7757/24 in plastic box.

Shipments replacement heads 7757 > 1949 (start),

1951 = 40.000, 1952 = 125.000, 1957 = 2.500.

Total 1949 - 1957 = approx. 300.000 heads.

Price in Holland 1955 = f 6,00.

Production in Holland and in Spain.

Last active versions 7757/03, 7757/04 and 7757/18.

**Note:**

An important feature of the Philishave shaving system is the self-sharpening effect.

Based on a difference in hardness between cutter and guard (cutter is harder and wears faster).

Tests support the claim that after over 1000 shaves the performance in general is still equal to new.

In 1954 complaints from consumers about reduced shaving performance after short period of use.

Laboratory reveals that cutting edges get blunt.

Research for cutter material with higher wearing factor starts.

Philishave design of a new single header

A new 1-head design with square body is under preparation in 1945.

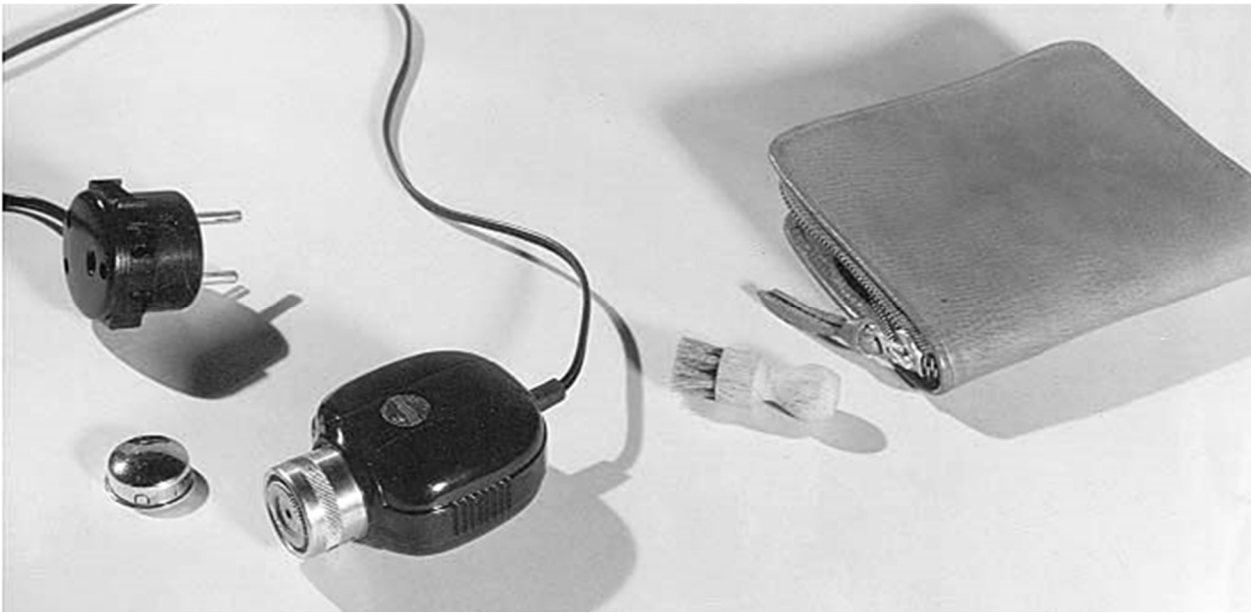


Illustration: Study project registered as type 7735/00 on copy of picture C 19949 dated 15-11-1945. Picture gives impression of product from trial moulds. Prototype in Philips Archive Eindhoven.

1946 miscellaneous

International Philishave meeting. (Next meeting will take place in 1951).

Meeting NAC (=New Articles Commission). November 1946. Subjects a/o:

Order to develop shaving mirror with light 1946/11. Working model in 1947.

No interest in proposed cassette with mirror. Design plug 7735 approved.

First working model Ladyshave presented.

13-11-1946 milestone celebration of 500.000 shavers produced since 1939.

'Silver' PHILISHAVE '6' presented to ir. F.J. Philips.

Other products related to the shaver department 1947 – 1951

Shavers are part of 'Small Appliances', a subdivision of RGT = Radio-Gramophone-Television.

Important products in these years are irradiation, bicycle lighting, hearing aids and 'white goods'.

Bicycle dynamos are produced around 1947 in an old windmill at Roermond by 200 girls.

Shortage of workforce at Eindhoven after World War II made it necessary to find another location for the production of shavers. The assembly method of the Steelbeard model has a basic resemblance with bicycle dynamos (energy unit in a closed cylindrical housing).

This might have been one of the reasons to select Roermond as a production centre for shavers.

In 1951 shaver production moved to Drachten.

A selection of various development projects:

1947 Hub dynamo.

Cigar lighter with rhodium/platinum spiral and 'knijpkat' dynamo system.

1948 NUFA clock. Design for synchronous clock + 'Bim-Bam'.

Smallest 8 mm movie camera in the world + projector. (Sold to Argus USA ~1955)

A 35 mm still camera to succeed the flash camera.

Market orientation motors for bicycles.

1949 Hairdryer development. Stator and rotor fixed independently in plastic housing.

Cost f 11.90. **1951** Trial series 500 hair dryers.

Cancelled after motor problems in 'working' plastic housing.¹⁵

¹⁵ In 1954 Bram Porrey, who just joined Philips, was ordered to check the stock of these hair dryers and destroy the defective products = all of them.

Ergonomically perfection in the 'egg' design.

The move from stick model to the new 7735 design is ergonomically and technically a masterpiece.¹⁶

Type name: Staalbaard ivoor (Holland), **Ivory**. Nicknames 'eitje' and 'eendje' = little egg/duck.

Type numbers: 7735 AC versions, **KL 2400 & KL 2401** battery.

Norelco **7748G**, introduction 1954 with waved slots shaving heads.

Special version for France, brand Radiola and modified housing brand Raselis.

7735K = KLM version with engraved emblem and 'Royal Dutch Airlines'.

Production till May 1948 = 33.000 shavers 7735. Total production till May 1952 = 1.1 million products. End of production 7735 approx. 1954.

Type 7735 is introduced in Holland in 1948 as 'Staalbaard Ivoor', packed in a carton display box.

Simultaneously model 7733 is downgraded in the same carton box at a lower price to stimulate sales.

Philips argument: the leather zipper wallet (type 7733) is only used by a small minority of consumers.

Price 7735 in Holland 1949 = f 47,00. Leather zipper wallet sold separately at f 4,50.

Norelco: 10 samples of the Norelco version 7735 are completed April 1949.

Summer 1950 shipment of 5.000 shavers 7735 to USA. Target for 1950 = 67.000 shavers.

In view of the disappointing 7733 sales (\$ 22,50) the introduction price is fixed at \$ 16,50.

A breakthrough in sales, however, has to wait for the introduction of the doubleheader.

The very critical USA market demands more attention for quality and appearance.

The Commercial Department insists on a red brand name for the Norelco shaver.¹⁷

1951 Battery version KL 2400 maroon (Bordeaux red) and KL 2401 ivory

Specification in 1949 and first production run as type number **7735**.

Recoded to KL 2400 in new type number system before production start. (KL group was allocated to all Personal Care products before decision was made to give shavers a separate SC group).

Plug connector as Philips flashlight camera. 11 shaves average 7 minutes per day.

Motor designed for nominal 3,6 Volt, efficiency 20%. Cutter speed nom. 4.500 rpm on 6 Volt.

Samples prepared 1949/04: 5x for 6-12 Volt and 5x for 24 Volt.

Versions specified in 1949 as type number 7735.

7735/11 = 7735 version designed for 6 volt with separate resistor.

7735/21 = 7735/00 designed for 24 Volt, without resistor. Packed in export carton.

7735/22 = 7735/21, but without additional shaving head, no 'Made in Holland', in bulk pack.

7735/12 = KL 2400/12 = Maroon-6 + adapter P 6.530.020 for torch light in carton box without pouch. Sold in the Netherlands 1955. Sales price f 39,75.

In 1951 production start. Production till May 1952 = 18.500 products KL 2400.

Introduction of the version with battery box for flat 4,5 volt battery summer 1952.

Replaced by version for 3x round battery type D at a later stage.

Versions specified in 1952/01:

KL 2400/01 = product in bulk pack.

KL 2400/02 = product in carton box, without pouch, with brush and instructions for use.

KL 2400/03 = product in carton box, with leather pouch, brush and instructions for use.

Maroon version with battery box KL 2806 flat battery 4,5 Volt introduced summer 1952.

Number of shaves claimed 30.

Germany "Schermann". Ivory version in 1953, price DM 48,00. Battery box DM 2,90.

¹⁶ It is often assumed that Raymond Loewy has been the designer of the egg model. This is most unlikely. Nowhere in the notes of Loewy, nor in biographies such a reference to this famous product can be found. Enquiries amongst Philips designers did not reveal any reliable information in this respect. But, of course, the Philishave 'egg' model 7735 radiates the design style of Raymond Loewy.

¹⁷ Red will be for many years to come the major accent colour.

A product proposal without red button will be disapproved of by commercial manager C.M. v.d. Put immediately Norelco will always insist on a red inside of the shaver wallets.

Specifications of the 'egg' design type 7735

Designer Joop van Osnabrugge. Factory cost 1948 = f 13,25 (~same as 7733).

New series motor 110 V and transmission. Cutter speed 2500 - 3400 rpm. New plug, design 1946/11.

Norelco 10 samples 1949/04. Release test 6- and 3-pole rotor 1951/11.

Production code under dust removal ring.

Initially dust removal ring with 'ridges' for extra grip to lock ring in either open or closed position. Shortly after introduction construction modified into (cheaper and more durable) ring with flanges.

Samples with and without 'ozone-holes' in housing. In 1951 still illustrations with round disc cutter.

Versions with resistor plug in display carton without wallet:

7735/01 = Export carton. Ivory box with blue carton insert.

Text: PhiliShave Ivory, Philips emblem, drawing of shaver in hand.

7735/02 = Special carton for Holland. Text: PhiliShave, Staalbaard Ivoor, drawing of Steelbeard man.

7735/03 = Version with special label for Belgium on lid of carton box.

7735/20 = shaver wrapped in 'silk paper', packed in export carton with brush, dfu and guarantee card.

Type name in Holland: Staalbaard Ivoor. This name appears on carton box still end 1951.

Promotional name in 1952 = ivoor-6.

Price shaver in carton box Holland 1949 = 47,00. Price zipper wallet A 1.336.52 in 1949 = f 4,50.

7735/05 = version in zipper wallet, packed in export carton .

Production Eindhoven till 1948/04 = 33.000, 1949 = 110.000, 1950 = 290.000 incl. 55.000 local assy.

1951 = 430.000 incl. 100.000 local assy. 1952 = 270.000 incl. 206.000 for local assy.

In 1953 only 10.000 for local assembly.

Total production till 1952/04 = 1.14 million shavers + 250.000 motors.

Various versions for local production:

Austria > 7735/08 = Assy in Austria, parts from Holland.

1949 -1951/52 = 100.000 shavers > 1950 = 15.000, 1951 = 31.000, 1952 = 56.000 shavers.

Australia production preparation 1951/03. Special motor designed for 240 Volt. Plug with 3 pins.

Local production/assembly 1951 = 18.000, 1952 = 66.000, 1953 = 30.000 shavers.

7735/13 = 7735/06 mono 220 V, but inscription 'Made in Australia'.

7735/14 = motor 200-250 V. Flex without plug. Local pack Australia.

7735/42 = mono 220 Volt, different plug and 'Made in Australia'.

Canada assembly in 1949 + 1950 = total 7.000 shavers.

7735/60 = head 7757/03. Production Drachten for Canada.

7735/61 = Assembly in Canada, parts from Drachten.

Denmark assy 1949 = 9.000, 1950 = 20.000, 1951 = 28.000, 1952 final = 86.000 shavers.

7735/09 = 7735/00, disassembly in Drachten for re-assembly in Denmark.

7735/36 = assy in Denmark 1949 - 1952 = 145.000 shavers. Sales Denmark start 1949.

Norway assy in 1950 = 17.000, 1951 = 35.000, 1952 = 35.000, 1953 final = 3.000 shavers.

7735/40 = 7735/00, disassembled for re-assembly in Norway.

7735/10 = /00 assembly in Norway 1949-1952 = 90.000 shavers.

7735/15 = /10 in leather wallet.

7735/41 = 7735/05 impregnated rotor according to SEMKO for Sweden.

7735/43 = /00, SEMKO, export carton without wallet.

Uruguay local assy in 1952 = 400 shavers.

7735A/00 = specified 1951/10 with cheaper motor.

7735/26 = as /25, but shaving head with 10% narrower slots (0,25 mm) in wallet. No data on purpose of this special head. Experimental for sensitive skin to reduce skin irritation? Or for Ladyshave ?

7735/18 = 7735/00 but shaving head with 180 holes (= waved slots with 3 holes per slot).

Versions mono voltage: 7735/04 = standard trade plug, 90-120 V.

7735/51 = American plug. 7735/06 = 220 Volt.

7735/00 = shaver with flex, basic version without packaging.

7735/99 = version without shaving head.

Specifications of the 'egg' design types 7735 + 7746G

7735 K ivory version, KLM Royal Dutch Airlines inscription, 115 Volt, moulded USA plug, special KLM pouch with additional replacement shaving head. Specified 1949/02.

France 7735/04 = First version for France (ref. service doc. 1950/09). Introduction 1950. Local production/assy 1950 - 1953 = 650.000 shavers.

In 1953 only production of version RA 5000 = 8000 shavers.

France production in 1950 = 13.000, 1951 = 250.000, 1952 = 350.000.

Final production in 1953 = 40.000 shavers.

7735/17 as 7735/00 interference suppression for France. Dust cap embossed.

Supplied in bulk to France for local completion.

7735/19 as 7735/17 without plug. Version in red plastic zipper pouch found.

Raselis modified design with 'grip-ornament' at both sides of shaver-housing.

Trademark CSCF on shaver and plug, Raselis and 7735 on shaver.

Leather wallet. Sales in 'Coutelier' shops France.

Great Britain Introduction October 1949.

Local production from early 1949 till summer 1952 = 200.000 shavers + 25.000 motors in 1951.

1949 = 8.000, 1950 = 53.000, 1951 = 75.000, 1952 = 58.000, 1953 final = 4.000 shavers.

7735/30 in plastic wallet, specified prior to 1950/09. Resistor plug with thick round pins.

7735/30 specified in carton box, no pouch.

7735/31 110-160 and 165-250, modifications in the text.

7735/32 as 7735/30 without 'Made in England'.

7735/34 packed in plastic wallet.

7735/35 packed in leather wallet.

Germany > Introduction on August 18th, 1950.

Production Wetzlar/Germany in 1951/52 = 160.000 shavers. (1951 = 22.000, 1952 = 140.000).

7735/45 as /36 made in Germany (Wetzlar), VDE plug.

7735/44 as /45, plug without VDE approval.

7735/46 as /00 in German packaging. Carton ivory/brown, text 'Das Geschenk für den Herrn'.

7735/47 as 7735/00 production Holland, but in fancy box with special label for Germany.

Price in 1949 = DM 65,00. In catalogue 1950 - 1952 shaver = DM 48,00. Leather pouch = DM 7,00.

Promotion = Mirror with drawing of one-head puppet. Text 'Philips Schermann Trockenrasierer'.

7735G type number for shaver equipped with 'waved slots' shaving heads:

7735G /12 basic version, shaving head with 120 holes and turned/ground cutter type 7757/02.

7735G /51 Canada, shaving head with 120 holes = 'waved' slots. Leather zipper wallet.

Norelco versions with standard and waved slots.

7735/07 as 7735/00 in leather zipper wallet of model 7737.

7735/50 Norelco shaver with flex and moulded USA plug without packaging).

7735/55 as 7735/50 in zipper wallet.

7735/56 as 7735/50 in lip-button wallet.

7735 G/07 as 7735/07 in leather zipper wallet of 7737, 'waved' shaving heads, formed cutter.

7735G Norelco is specified November 1950. Introduced ~1951?

Shipment of first 5.000 shavers approx. June 1950. Total planning 1950 = 67.000 shavers.

Introduction price \$ 16,50 compared to previous \$ 22,50. Price \$ 16,95 in 1950. \$ 19,95 in 1952.

Sales in USA with single header not successful. Breakthrough starts with doubleheader.

7746G **Norelco** 7735 ivory, waved slots, detachable cord set USA plug.

Inscriptions: Norelco [red], North American Philips Co. Inc. 110 V. 6 W. AC/DC.

Type 7746. Made in Holland.

7746G /00 specified as ivory shaver, shaving head with 120 holes. USA cord set.

7746G /01 as /00 without flex and plug.

7746G /02 as /00 in leather wallet and Norelco carton.

7746G /03 as /01 in leather wallet and Norelco carton.

Production only in 1954/55 = 5.000 shavers.

Study concentric (dual track) shaving heads¹⁸ type 7760

Patent application in **1942** by Philips (Chris Dankers) for a shaving head with more slotted rings.

Type number **7760** issued ~1948 = shaving head with 2 or more cutter tracks in concentric circles.

The guard, diameter approx. 20 mm, has 150 slots, outer ring 90, inner ring 60. Total length 5 mm.

Cutter diameter 18 mm, 6 single blades in one piece, width 4,5 mm, groove in centre.

At least 40 working prototypes are produced.

Laboratory research on concentric heads in 1954 very active.

Study large concentric head approx. 1955.

Similar to Vaan A11, Japan. Shaving head holder to fit Philips Ladyshave 7738.

Diameter 34 mm with 80 + 40 slots. 5 cutters x 2 solid blades.

Diameter 28 mm with 90 + 45 anti-clockwise slots, no holes. Cutter 8 + 6 blades.

See for continuation separate specification sheet = **7760 study**.

Study 7735 + concentric heads 7760

In 1949 a schedule is made to introduce concentric heads 7760 on the single head 'egg' model.

Prototypes of the head prior to 1948. Realisation in March 1949 on 5 shavers type 7735.

Type numbers 7744 + 7745 are reserved December 1949 for Philishave and Norelco versions.

Type **7744** = specified as universal shaver, cream/ivory colour, shaving head with 150 slots.

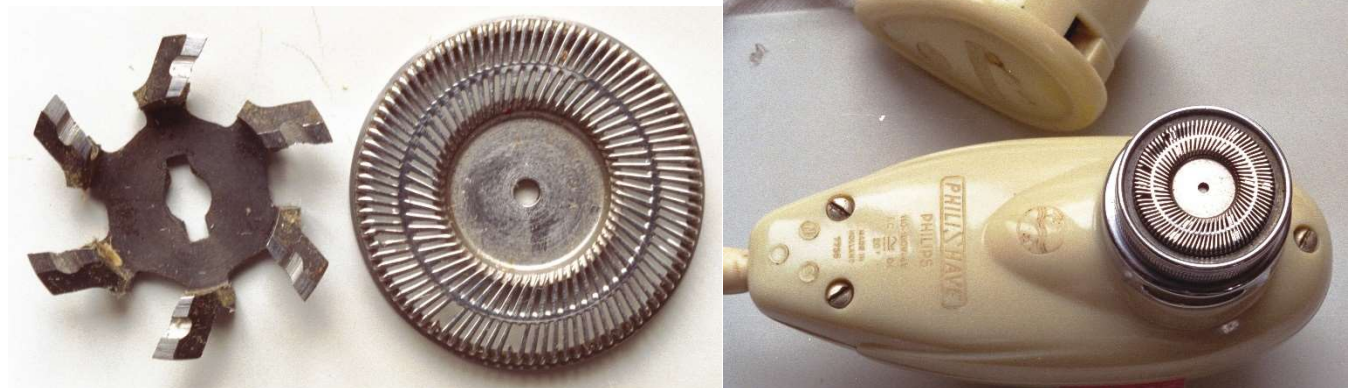
Small quantity heads produced for tests [more than 40 heads] on shaver 'egg' type 7735.

Sample of shaver found with production code on shaving head 1948.

7744/00 = Philishave shaver 7735, fixed cord. Without packaging. No production for sales.

7745/00 = as 7744/00 Philishave, but detachable cord set with American plug for Norelco.

Cream / ivory colour. No production for sales.



¹⁸ Patent application 105181 filed 18-3-1942, published 15-5-1946. Patent 59161. Christiaan Jacobus Josephus Dankers. Extension of main patent No. 54862 dated June 16, 1943.

Application UK May 31, 1946. Number 16554/46. Published Oct. 10, 1951. Patent number 658,736.

Patent application concept for multiple slots/blades construction PH 14.412 of 01-05-1957 (Gk. 23180).

Patent appl. v.d.Driest concentric head 296894 of 20-08-1963. PH 18.568 (Gk. 31922-32163). Drawing dual blade 1 piece.

US patent v.d.Driest 3,261,091 = 1966-7-19. Filed 1964-7-23. Serial 384,613. Priority Netherlands 1963-8-20 No. 296,894.

US 3,624,681 filed 1969-8-22 Frans Zuurveen and Eduard Willem Tietjens. Priority Aug. 31, 1968 Netherlands 6812446.

Subject shaving head with multiple rings, independently floating. Samples produced at Nat. Lab. Eindhoven.

Other patents:

Patent NL C.D. 672.715, application 96998 1940/02/20, priority 1939/02/21. Cutter centring on one side of running groove.

Dutch patent application 99157 9-10-1940 for version with 'dented' cutter blades, patent 55684 (PH 7297) 15-12-1943.

UK patent UK 550,903 1943/01/29, application 1941/12/18. Cutter centring on one side of running groove.

Patents: Patent 59158 (PH 7802), application 104325 of 13-01-1942 by A. v.d. LEE and W.L.L. Vivie.

Patent 60290 (PH 7904), application 105143 of 14-03-1942 relates to reinforcement construction of guard.

Patent 61165 (PH 8452), application 109558 of 02-02-1943 relates to central support of guard. UK patent 618,303.

Patent 61903 (PH 8454), application 109643 of 05-02-1943 central guard support, additional to patent application 109558.

Applications R. Keblusek for reversible cutter + guard with separate slots/holes (choice for thick or sensitive skin:

Appl. 108353 = 4-11-1942. Pat. 64976 (PH 8211)+108354 = 4-11-1942. UK 646,778 (as 64976). Patent 59721 (PH 8212).

Patent Germany 729711 1941/01, priority NL 1940/01. Reversible cutter with reserve blades.

Patent NL 61144, appl. 109809 16-02-1943 by Kronouer and Keblusek. Guard shaving head supported by ball-bearing.

Patent Germany 915902, erteilt 8-7-1949 = 29-7-1954. Priority 16-02-1943 by Kronouer/Keblusek. UK patent 618,112.

Patent NL 64161 for shape of lamellae and production method, application 112331 of July 23, 1943. UK patent 626,367.

Rotary Action Ladyshave type 7738. Studies lady shavers.

The first rotary action shaver¹⁹, specifically designed for women, is introduced in 1950 as type **7738**. The service shaving head is sold as type number **7758**. Version /00 with turned cutter, /03 formed. Replacement shipments from 1951 - 1954 = 2.400 heads.

The shaver design is derived from the 'egg' type 7735 with modifications of the and shaving unit. Working sample ladyshaver 1946/11. Study model 7738 with shaving unit of type 7735.

Norelco 12 samples 1949/11. Introduction USA in 1950. Sales Norelco 1950 = 11.000

7738/13 and 7738/14 versions (with dual resistor plug?), ivory housing and chrome dust cap'

Packed in imitation peau de suède wallet.

7738/00, /17, /19 are versions with chrome protection cap.

Production Eindhoven till 1950/04 = 9.130, 1950/05 - 1951/04 (final) = 20.000 shavers.

Demonstrations France 1950/51 in theatres/cabarets, Foire de Paris and swimming pools.

Special promotional activities at the beaches (in a tent). 50% of women in France epilate.

Versions for France with motor designed for 90 Volt.

Interference suppression with 2 ceramic capacitors + choke coil in plug:

7738/01 Gold plated protection cap.

7738/04 Gold plated dust cap. Red leather wallet. Nylon brush and DFU for France.

7738/18 as /04 with chrome protection cap.

7738/15 as /04 chrome protection cap, in bulk pack.

7738/05 version for medical purposes with chrome protection cap in carton box.

France acts as pioneer in 1950/51 to find marketing tools for selling Ladyshave.

Appoints a female demonstrator on duty in hospitals to support sales through medical channels, viz. orthopaedics, cutlers and dealers in surgical instruments.

7738/02 basic version with gold plated protection cap and special shaving head.

(head not specified). Packed in white leather wallet.

Norelco versions.

7738/10 Lady Norelco Electric Razor, gold plated protection cap, American plug, no pack.

7738/11 as /10 but motor designed for 90 Volt, in red leather wallet.

7738/12 as /11 in white leather wallet.

Norelco wallet with hinge lid and lip-button lock. Off-white with green inside.

Version with chrome cap in satin lined, soft suede-like travelling zipper case.

7738/16 as /06, chrome dust cap, American plug, motor 90 Volt, luxury peau de suède wallet.

Probably sold with USA plug as Philips brand to other countries, e.g. Canada.

SC 7761 Norelco modified 7738, ivory, chrome protection cap, fixed flex. Sales approx. 1953?

SC 7770 specified in 1953 as Norelco 7738, in luxury leather wallet. Probably not sold?

Study projects

7738 with **Rotafoil** Clipper head = Philishave slotted ring, diameter 25 mm + round foil.

Working prototype on modified 7738 shaver with maroon bottom cap. Probably made around 1954.

Study 7738 with Rotary **clipper** unit for long hairs. Housing enlarged for stronger motor. ~ 1954.

1950 – 1953 study Ladyshave 1-head 'ball-shape' type number 7747. Perfume bottle design.

Design 'Ball-shape'. Unit derived from 7735, shaving head **7757/03**, transparent plastic dust cap.

Cream colour. Universal motor 110 Volt. Cord set with moulded USA plug to be purchased in USA.

Specification 10-06-1950. Estimated total series 100.000. Target cost price basis 1950 = f 8,00.

Development stopped 15-10-1951. Re-activated 5-1-1952. Project cancelled 29-09-1953.

Symmetrical motor 110 Volt. Rotor mounted in housing independently from stator.

Same risky construction as first hairdryer in same period. Working model, ivory lacquered housing.

Similar dummy designs of lady version associated with perfume bottles. Shaving head 1957.²⁰

¹⁹ Ladyshave activities prior to the introduction of model 7738 in 1950 are:

Promotion for use as ladyshaver in documentation and instructions of menshaver model 7730.

Lady study project: Shaving head 17 mm. 48 slots. Guard with 12 holes low position at flange for removal of beard dust. Shaving head holder with skin stretcher. Guard and shaving head holder are both gold plated. Miniature grinding stone unit for manicure. Single sample as proof of study ~1941.

²⁰ Picture of ivory Norelco Ladyshave with dust cap and cord set in Philips archives: C 32490 dated 11-08-1950.

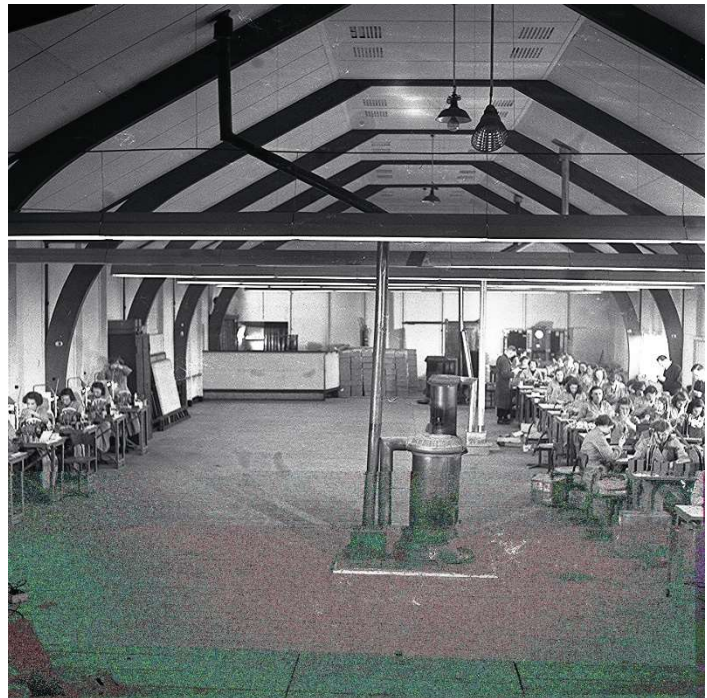
A strange duck = second brand men shaver.

P 9500 = a special single head design, flat cylinder type. Basic version with smooth housing. Clear distinction from Philishave designs for sale under second [Philips] brands Pope and Radiola. Motor designed for 110 - 160 Volt. Resistor 1700 Ohm for 165 - 220 Volt connection. Pope P 9500 smooth housing with textured centre part. P 9500 versions packed in green and brown wallets, leather and plastic. Plastic cassette. Production Holland in 1951 = 1.000, 1952 = 11.000 shavers. Total 12.000 shavers. For service supply the Philite gearwheel has been replaced by nylon in 1954. Production from 1951 till 1954. Revived as Ladyshave SC 7780 in 1957. P 9500/01 = basic version in wallet. /03 = -/01 without plug, 220 V. P 9500/04 = 230 Volt, bayonet plug, plastic wallet. /05 = artificial leather wallet, blue silk lining. **RA 5000** Radiola = P 9500 with ribbed housing. Motor 90 Volts with interference suppression. Voltage switch. Radiola emblem. Only produced in France in 1954 = 7.700 shavers.

November 1950: Santa Claus promotion UK: "I am the only man who does not need a Philishave"

1950-11-13 start shaver assembly Drachten

Initially with 25 girls in VVV building, 450 m². Option for a trial period of 1 year. Expectation to employ 750 persons, of which at least 300 - 400 girls. Reason: Potential lack of labour in Eindhoven. High unemployment in Drachten region. Positive result of a psycho-technical test of local females interested in such work.



1951 Second international Philishave Convention, 3 days.

Since 1948 in each consecutive year the production volume was doubled.

Success of sales is 'bewondering', but '**Don't get roused, stay sober**'.

Slogan 'The sky is the Limit'.

Items: Never increase sales price above f 50.-. Price level to be related to Sweden.

Everyone, who can buy a decent pair of shoes, should be able to buy a Philishave.

(Note: In the seventies the shoes will be replaced by a Television set !)

Denmark: 75% of sales on basis of hire-purchase.

France: Price of Radiola 'powder box' model (=RA 5000) may never drop below Philishave price.

Discussion about 'cheapening the package'.

2 versions: a leather and a nylon bag. Choice to be determined per country.

Advertisement for Philishave in 'Braille'. *Ladyshave as 'Beautyphil'*

On May 8th, 1951 the 'Canteen' building is officially opened. The assembly is moved to this location.

The activities include bicycle lighting. In July a group of workers is trained in Eindhoven.

The construction of further halls for office, development and production is on its way,

Total sales of electric shavers in USA: 2.5 million.

Production and assembly in 1951 outside the Netherlands = 1 million shavers: Countries a/o:

Australia, Denmark, Germany (sales 1950 = 50.000), France, Norway, Austria, Great Britain.

Release in 1951 of special Philishave 'Shavemaster' for prince Bernhard.