



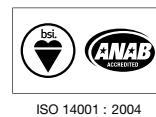
®  
Partners in  
Innovation +  
Excellence



**AWARD-WINNING  
PRODUCT DESIGN  
AND WORLD-CLASS  
MANUFACTURING  
FOR LEADING  
CONSUMER BRANDS**



## CORPORATE BROCHURE



At HAYCO we believe that success is less about what you do than about how you do it. We believe in the dignity of making things that help to improve people's lives. Practical products that make a difference. Made with diligence, care and commitment. But more than that we believe in co-operation. Working together with our clients hand in hand towards a common goal. We believe in embracing new ideas and the constant pursuit of better ways of doing everything. Because we believe that is the only true route to progress. Working together with equal passion and mutual respect as partners in innovation and excellence.

# HAYCO AT A GLANCE

## CONCEPT CREATION P.13

Our product development teams work closely with clients to shape the product specification.

## DESIGN AND DEVELOPMENT P.15

Our in-house model shop can rapidly prototype the 3D CAD files to accurate parts within hours.



## INJECTION MOLDING P.21

250 machines from Europe and Japan ranging from 85 to 650 tons.

## ENGINEERING P.15

Our team develops the product for mass manufacturing.

## ● MOLD MAKING P.19

All Hayco molds are made in-house.

## ● INJECTION STRETCH BLOW MOLDING P.23

Hayco has expanded its manufacturing capabilities through acquisition to now include extrusion blow molding and injection stretch blow molding.



## ● QUALITY ASSURANCE P.29

Advanced testing equipment to maintain accuracy and precision.

## ● BRUSH MAKING P.25

High-performance drilling, tufting and trimming machines for household cleaning and toothbrushes.

## ● ASSEMBLY P.27

During the assembly process we focus on optimizing speed, accuracy and in-process quality control.

### ● OUR PEOPLE P.33

Hayco's diverse array of talent brings a global perspective to innovation and a better understanding of our customers' values and needs.

### ● GLOBAL LOGISTICS P.40

More than 150 million products, backed by comprehensive traceability, to customers across 40 countries every year.

### ● PACKAGING P.31

Automated systems that form, fill, seal, mark or label.



### ● CONSISTENT MANUFACTURING P.27

Hayco prides itself on consistent quality manufacturing.

### ● LOCATIONS P.41

Hayco builds a manufacturing hub in the Dominican Republic to enable shorter lead-times and higher flexibility for US-based clients. Production starts 2017.



# WHY PARTNER

Hayco is the partner of choice for the world's leading brands and retailers, recognized for delivering innovative products, manufacturing and technical solutions. We specialize in collaborating with customers during the product development phase to collectively create innovative products that meet consumer needs.

Hayco's in-house capabilities include expertise in design, mold making, injection molding, assembly, quality assurance and control. This successful formula has seen Hayco form long-term, prosperous partnerships with multinational companies.

## BUILD TRUST

Thirty-year history of longstanding partnerships, and a company culture fostering integrity, creativity, and open communication.

## CREATE VALUE

Vertical integration (R&D, mold making, injection molding and final assembly) ensures rapid development of quality products and efficient mass production.

## ACHIEVE RESULTS

Proven manufacturing and supply chain operations. High quality, cost effective and flexible manufacturing with outstanding supply performance to the world's leading brands.

2



1. Our multi-cultural teams provide seamless communication with customers around the world enabling efficient and rapid product development.
2. Hayco provides efficient assembly operations compliant with GMP standards.

1



**PARTNER**  
**Build trust.**



**INNOVATE**  
**Create value.**



**EXCEL**  
**Achieve results.**



# OUR VALUES

To continue to succeed in business, we must plan for the future. This involves being proactive, listening to our customers, and adapting our business to trends that have the greatest impact.

As a result, we are consistently recognized by our customers for our high level performance in product quality, on-time delivery and ethical standards.

Our promise to being your Partner in Innovation and Excellence is achieved with our core values that provide guidance for everyone at Hayco.

They enable us to work effectively together and at the same time provide a better place to work and a better service to our customers.

## PARTNERSHIP

Collaborate, nurture, maintain and value long-term relationships with employees, customers, suppliers and our community.

## INNOVATION

Create value, be a pioneer and embrace change in all that we do and serve.

## EXCELLENCE

Guarantee quality at every stage by proactively striving to exceed the expectations of those whom we partner with.



1. Hayco safeguards our customers by maximizing the protection of sensitive, technical and commercial information.
2. We collaborate to create value and strive to exceed the expectation of our partners.



**BEAUTY CARE**



**PERSONAL CARE**



**ORAL HEALTH CARE**



**BABY CARE**



**WATER FILTRATION**



**PERSONAL HYDRATION**



**HOUSEHOLD CLEANING**



**PROFESSIONAL CLEANING**

# CREATING WORLD-CLASS PRODUCTS

Hayco works with the world's leading brands to design, develop and manufacture products in the following fields:

## BEAUTY CARE

Hayco has been expanding its capabilities into the beauty care segment utilizing its experience in brush making and product design.

## ORAL HEALTH CARE

Hayco designs, develops, tests and manufactures power toothbrushes with a monthly output of more than 1 million devices. The high-volume assembly is undertaken in our Class I medical device facilities registered with the US FDA and in accordance to ISO 13485, medical device quality management certification.

## WATER FILTRATION

Hayco utilizes its design engineering and injection molding capabilities to manufacture a range of pitchers and tap filtration systems.

## HOUSEHOLD CLEANING

Our historic roots in brushware trace back more than 100 years, so it is no surprise that we are one of the largest brushware manufacturers in the world. In addition, Hayco is a leading producer of household floor care devices.

## PERSONAL CARE

Strict and safe assembly of innovative electrical and non-electrical personal care devices also takes place in our clean-room facilities.

## BABY CARE

Hayco develops & produces BPA-free baby feeding bottles, toddler utensils, pacifiers for top brands. Our products are manufactured under strict quality procedures and fully comply with FDA requirements for baby products.

## PERSONAL HYDRATION

Hayco manufactures premium BPA-free water bottles and personal hydration products.

## PROFESSIONAL CLEANING

Being one of the largest household brush manufacturers in the world, means that Hayco also makes a wide range of devices for the professional cleaning market.



# CO-INNOVATION & DEVELOPMENT FOR MASS MANUFACTURING

## CONCEPT CREATION

Hayco's hallmark is collaborating with its customers during the development phase to translate consumer insights into product designs. Together, we share our design and engineering expertise and listen carefully to our customers who have valuable market and consumer intelligence. This combined knowledge creates the leading edge needed to manufacture innovative and consumer-oriented products. Once designs are ready, our in-house model shop can rapidly prototype the 3D CAD files to accurate parts within hours.

This is achieved by the use of a range of rapid prototyping services: Objet, FDM, SLS, CNC, silicone casting and painting. This process is crucial as it allows testing and verification of both engineering and aesthetic aspects.



IDEATION



INDUSTRIAL DESIGN



RAPID PROTOTYPING



1



2

1. Decorative finishing in a vast range of colors and surface textures.
2. Rapid tools to learn from real products and get quality production tools right the first time.



# ENGINEERING SOLUTIONS FOR MASS MANUFACTURING

## DESIGN & DEVELOPMENT

Hayco's capabilities include conceptual, industrial, mechanical and electrical development skills. Hayco develops tailor made electronics & power/battery management systems. Software is used throughout product development; Pro Engineer and Solid Works for 3D CAD design, ANSYS for Finite Element Analysis, ORCAD for electronic circuit development and PROTEL PCBA software to determine optimal PCB configurations.



DESIGN FOR EXCELLENCE (DFX)



FIT FOR USE



ELECTRICAL ENGINEERING



MECHANICAL ENGINEERING



RAPID TOOLING



PACKAGING DESIGN

## ENGINEERING

Our mechanical and electrical engineers develop the product fit for mass manufacturing. Mold Flow analysis is used to predict plastic flow, deformation and stress analysis. All products are put through rigorous abuse and life testing to ensure "Fit For Use". Our in-house Testing Laboratory ensures that all prototypes and products meet requirements.



PRODUCT VALIDATION



TOOL DEVELOPMENT AND MATERIAL SELECTION



MOLDING & DATA VERIFICATION



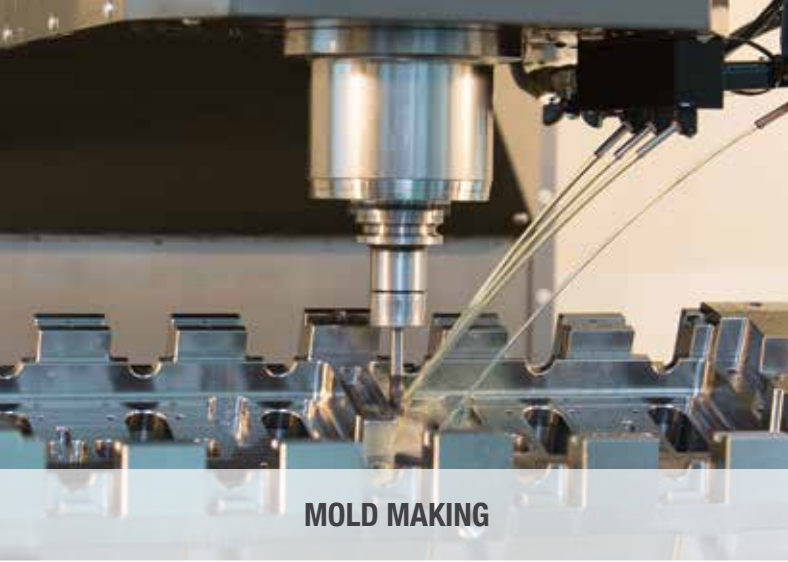
INDUSTRIALIZATION



LIFE-CYCLE MANAGEMENT



1. Hayco's capabilities include conceptual, industrial, mechanical and electrical development skills.
2. Hayco works closely with its customers to create leading products that meet customers' needs.



**MOLD MAKING**



**INJECTION MOLDING**



**INJECTION STRETCH BLOW MOLDING**



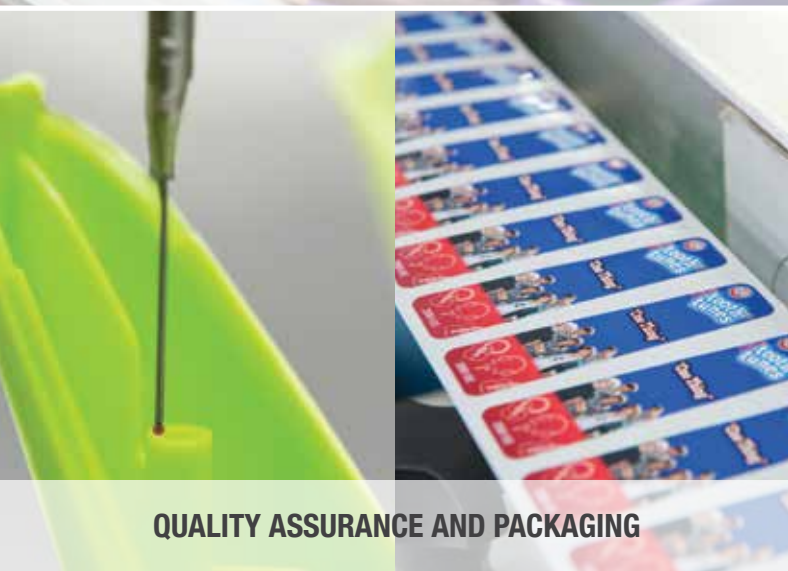
**BRUSH MAKING**



**MANUFACTURING CONSISTENCY**



**ASSEMBLY**



**QUALITY ASSURANCE AND PACKAGING**



**GLOBAL LOGISTICS**

# MANUFACTURING EXCELLENCE

High quality, cost effective and flexible manufacturing with an expanding supply chain to supply to the world's biggest brands.

## **MOLD MAKING**

Hayco prides itself on making world class molds in-house to ensure the highest quality parts.

## **INJECTION STRETCH BLOW MOLDING**

We expand our molding capabilities to injection stretch blow molding.

## **MANUFACTURING CONSISTENCY**

Hayco focuses on manufacturing high volume products to the highest levels of quality and consistency.

## **QUALITY ASSURANCE**

Hayco meets the demanding quality standards of the world's leading brands.

## **PACKAGING**

Hayco works closely with our customers to create innovative packaging solutions.

## **INJECTION MOLDING**

Capable of managing high-volume injection molding of precision/quality parts.

## **BRUSH MAKING**

Hayco designs and manufactures a wide range of brushes for household cleaning, oral care, beauty care and industrial cleaning.

## **ASSEMBLY**

Hayco has invested in automated assembly technologies, worker training and assembly process control systems.

## **GLOBAL LOGISTICS**

Hayco currently delivers more than 150 million products from its three facilities in Southern China. In 2017 a new facility in the Dominican Republic will open.

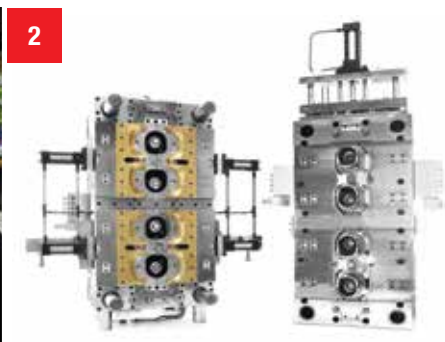


# HAYCO'S PRECISION MOLD MAKING

High quality, cost effective and flexible manufacturing requires the highest quality molds.

Hayco is one of the world's leading mold makers with high-precision molds made in-house. Having an international team of highly skilled toolmakers from Australia, Hong Kong, USA, India and Europe, coupled with cutting-edge technology, allows Hayco to consistently satisfy the needs of our customers.

- All molds are verified according to Six Sigma standards and CPK standards
- Parts are assured by Zeiss CMM
- Rapid tooling compresses standard prototype tooling lead-times
- Molds are designed with Moldflow FEA software and Unigraphics Team Centre Software
- Graphite and copper electrode technology
- Tool and life-cycle management
- In-house mold maintenance and repairs



1. Mold design and Moldflow FEA analysis.
2. Four-cavity two-shot mold.



**FERROMATIK  
MILACRON**

*Europe*



**FERROMATIK  
MILACRON**

*Europe*

**FERRO  
MILA**

# INJECTION MOLDING EXCELLENCE

Plastics is the heart of all products at Hayco. Once a mold is made it goes into one of our injection machines from Europe or Japan, such as Battenfeld. With a particular emphasis on 2K molding, high cavitation and automation, we continually expand and update our machinery to achieve the highest levels of precision and output.

- RJG trained technicians with scientific molding, ultimate dimension control through RJG eDART™ systems
- Premium resin material include ABS, GPPS, POM, PC, PP, SAN and Nylon, NSF qualified and BPA-free facilities
- Qualify molds up to Process Capability Index of 1.33 (CPK), ready for mass production
- Injection molding solutions include co-injection, overmolding, two shot (2K), gas assist and injection EVA
- Insert molding of motors, wiring, plastic and metal components



2

1. 2K (multi-component) injection mold.
2. Hayco is pushing operational excellence with next to press assembly.



1



# EXPANDING OUR CAPABILITIES TO ISBM AND SILICONE LIM

Hayco has many years of experience in injection molding. Now we are expanding this capability to include:

- 1) Injection Stretch Blow Molding
- 2) Liquid Silicone Injection Molding
- 3) In Mold Labelling

Hayco has also expanded its footprint to the personal hydration market by manufacturing BPA-free water bottles and personal hydration products for the world's leading brands.



1. Silicone baby bottle nipples produced by silicone LIM.
2. New Aoki injection stretch blow molding at Hayco.



# CONTINUAL INVESTMENT IN BRUSH MAKING TECHNOLOGIES

Hayco has a heritage of brush making and it continues to dominate household and industrial cleaning. To maintain this lead the company continues to invest in the latest equipment from Germany and Italy to improve quality and increase efficiency.

- The company produces more than:
  - 1 million household brushes per month
  - 1 million power toothbrushes per month
  - 1 million beauty care brushes per month
- Class I medical device facilities (clean-rooms) registered with the US FDA in accordance to ISO 13485



1. High-speed bristling.
2. Strict product validation and testing.



# CONSISTENT MANUFACTURING AND ASSEMBLY PROCESSES

During the assembly process we focus on optimizing speed, accuracy and in-process quality control. Our operations include Class I medical device facilities registered with the US FDA in accordance to ISO 13485, and food grade packaging operations compliant with GMP standards.

Most new products start life in one of our confidential prototype testing assembly line operations. This allows concepts to be manufactured and tested under the strictest confidence, providing valuable information for mass production and customers.

We have invested extensively in automated assembly technology, worker training and assembly process control systems. Most of our assembly fixtures and machines are designed and manufactured in-house by our technical teams.

In-process quality control is managed by specially assigned personnel who focus on functional and cosmetic assessments. Functional tests assess sound, safety, mechanism, electrical and real-life performance, while cosmetic assessments are made through routine inspections both visual and using technology.

In our drive for operational excellence, televised feeds stream round-the-clock Real Time SPC Data. This provides continuous monitoring to ensure our products are of the highest quality and meet customer expectations.



1. Co-packing floor care refills.
2. High-speed automated refill packaging machines.



# QUALITY ASSURANCE AND PRODUCT VALIDATION

Quality is the essence of Hayco, forming our mission and mindset. It begins with providing exceptional customer service to product development and is present in every stage, right up until final shipping.

As a part of this process we have integrated a quality management program in compliance with ISO 9001 certification to regulate operations at our three sites. This creates product and service consistency in support of Hayco's strategic growth plan.

In particular we enforce strict in-house qualification, validation and traceability systems across our operations. For instance, prior to production, all sourced raw materials and components from suppliers, including packaging materials,

are scrutinized using the latest technology. This enables Hayco and customer standards to be verified.

Prior to final assembly, all sub-assembled parts are checked by performance testing equipment, likewise during assembly. Barcoding systems enable us to trace and segment distribution lines, while all outgoing shipments are audited to ensure finished product conformity.

To remain at the manufacturing forefront, Hayco proactively refines processes in accordance with new regulations, industry practices and marketplace conditions.



1. In-process quality control testing system.
2. Heavy-metal and particle analyzer (Spectrometer).



**Intertek**  
IECQ QC 080000:2012



**Intertek**  
ISO/TS 16949 : 2009



**Intertek**  
ISO 13485 : 2003



ISO 9001 : 2008



# WIDE VARIETY OF PACKAGING

Hayco works collaboratively with our customers to create innovative retail display packaging and product display solutions that communicate their brand message.

Capabilities include:

- Packaging design for blister and clamshell pack
- Packaging design for automation
- Packaging design for high quality gift and display box
- Packaging design for PDQ, Shelf-ready packaging (SRP) or Retail-ready packaging (RRP)
- Product of point (POP) display design
- All packaging is extensively tested for transportation readiness



1. Finished goods packed and ready for global distribution.
2. Packaging automation machine increases production speed and doubles the output.



# OUR PEOPLE

As an employer of more than 5,000 team members from all over the world, Hayco's diverse array of talent brings a global perspective to innovation and a better understanding of our customers' values and needs.

We offer our employees much more than a fairly paid job by encouraging the development of talent throughout the company, with careers and advancement open to all. This is made possible through our extensive training programs.

Hayco also provides a "home away from home" atmosphere for our employees with a safe, clean working environment, quality meals, comfortable living quarters, round-the-clock on-site medical and health care and subsidized grocery stores. Recreational facilities such as basketball and pool tables are also available.

Our emphasis on safety at work is enforced through our Zero Safety Incident Program. Among their many other responsibilities, the Safety Team conducts multiple fire, chemical and floor drills at Hayco sites annually.

Hayco's goal is to be an employer of choice and aims to instill its core values of partnership, innovation and excellence across the company.



ICTI CARE Foundation

C0264





# COMMITMENT TO CORPORATE SOCIAL RESPONSIBILITY

Hayco understands it has a responsibility to give support where it is needed most – the communities in which we live and work.

That is why we set corporate benchmarks for sustainable growth and adhere strictly to international standards. This provides a framework for us to systematically control our environmental performance and increase the opportunities of our employees to learn new skills.

All our operations are regularly audited to ensure that we are progressively reducing the environmental footprint from the manufacture of our products. Our primary sustainability goals include minimizing water and energy consumption and reducing waste without compromising the quality of our products. We do this by intelligent design, constantly upgrading our technology,

implementing new processes and ensuring our staff are adequately trained.

But our commitment to fostering a sustainable future goes far beyond this. We are also proud to support the global efforts of the WWF through our Corporate Membership Program.

Hayco is also committed to the principle and the practice of equal opportunities in employment and recognize the benefits that a diverse workforce can add value to the business and contribute to the company. Recently our staff implemented the Sunshine Relay program for the recruitment of deaf workers for our operation line giving these individuals the opportunities to enjoy a fulfilling working environment.



1. Hayco has become a Pearl member of World Wide Fund for Nature (WWF) in Hong Kong.
2. Hayco executives received the Walmart Award of Merit for Energy Efficiency Improvement in the Pearl River Delta.



ISO 14001 : 2004



**SUPPLIER OF THE YEAR**



**EXTERNAL BUSINESS PARTNER EXCELLENCE AWARD**



**SUSTAINING 100% QAC**



**GLOBAL BEST PERFORMING SUPPLIER AWARD CONSUMER LIFESTYLE**



**MOST INNOVATIVE SUPPLIER**



**SUPPLIER OF THE YEAR**



**AWARDS OF MERIT PEARL RIVER DELTA**



**LEAD TIME REDUCTION**

# CUSTOMER RECOGNITION

## **PROCTER & GAMBLE SUPPLIER OF THE YEAR**

Received the honor of top performing global business partner for delivering long-term sustainable value, from a supplier pool of 80,000+.

## **PROCTER & GAMBLE EXTERNAL BUSINESS PARTNER EXCELLENCE AWARD**

Recognized as a consistent high performer, that drives value and growth for the sixth year.

## **PROCTER & GAMBLE SUSTAINING 100% QAC**

Scored a perfect QAC rating of 100% as part of the QAKE quality assurance program audit.

## **PHILIPS GLOBAL BEST PERFORMING SUPPLIER AWARD CONSUMER LIFESTYLE**

Demonstrated design excellence (DfX) in product and cost innovation, including a record time-to-market performance.

## **PHILIPS MOST INNOVATIVE SUPPLIER AWARD**

Won the “Most Innovative Supplier Award” for ideas pitched at an open innovation platform.

## **WALMART SUPPLIER OF THE YEAR**

Outperformed every key performance indicator in the areas of product quality, on-time delivery, ethical standards and business management.

## **WALMART AWARDS OF MERIT PEARL RIVER DELTA**

Honored as an outstanding supplier for sustainability and energy efficiency improvements.

## **WALMART LEAD TIME REDUCTION**

Lead time reduction demonstrates our ability in manufacturing, supply chain management and project management, enables customer to reduce time-to-market.

# HAYCO'S KEY MILESTONES

**1892**

William E. Hay, the grandfather of Hayco's founder Donald Hay, established the S.A. Brush Co. Ltd., a manufacturer of cleaning products in Australia.



**1938**

The S.A. Brush Co. Ltd. is renamed SABCO, and under the new leadership of William's son, F. Dean Hay, the company achieved strong growth.



**1983**

After two decades of international experience at SABCO, Donald Hay foresaw Asia's role in global manufacturing. He left the family company to create Hayco in Hong Kong.



**1961**

Following family tradition, Donald Hay the son the F. Dean Hay and the grandson of William E. Hay joined SABCO.

**1988**

Hayco formed a brush making and injection molding factory.



**1999**

Hayco moved to a bigger purpose built factory.



**2013**

Christopher Hay is appointed CEO of Hayco Group. Donald Hay assumes the role of Executive Chairman.



**1990**

Hayco's small team was a driving force behind the company's growth. Many of whom are still with the company.



**2010**

P&G awarded Hayco the "P&G Supplier of the Year" among its 80,000+ suppliers.



**2017**

Hayco is building a manufacturing plant in the Dominican Republic. The ground-breaking ceremony took place in August 2015. Start of production is planned in 2017.

# GLOBAL LOGISTICS

Hayco sits in the heart of the world's manufacturing hub, close to thousands of packaging, electronic and mechanical parts suppliers, as well as the three major shipping ports of Yantian, Shenzhen and Hong Kong.

Using the SAP, Hayco's purchasing and supply chain management team handles 5,000 TEU containers per year and procures more than 1 billion different incoming components from the company's network of around 400 long-term, quality-approved, supplier-partners.

Hayco's sourcing department is responsible for finding new suppliers, while the quality team qualifies samples and validates incoming supplies. Vendor performance is closely monitored by the supplier development team. The enforcement of non-disclosure agreements and a stringent supplier qualification process ensures the integrity of both the vendor and its supplies.

As a result, Hayco efficiently delivers more than 150 million products, backed by comprehensive traceability, to customers across 40 countries every year.

Starting at 2017, the new operation site in Dominican Republic will provide shipment efficiency to USA and Europe.



# LOCATIONS

## GLOBAL HEADQUARTERS



### HONG KONG

## OPERATIONS



### DOMINICAN REPUBLIC - SITE LAS AMERICAS

Injection molding and assembly  
commencing in 2017

## OPERATIONS



### CHINA - SITE A

Injection molding and assembly



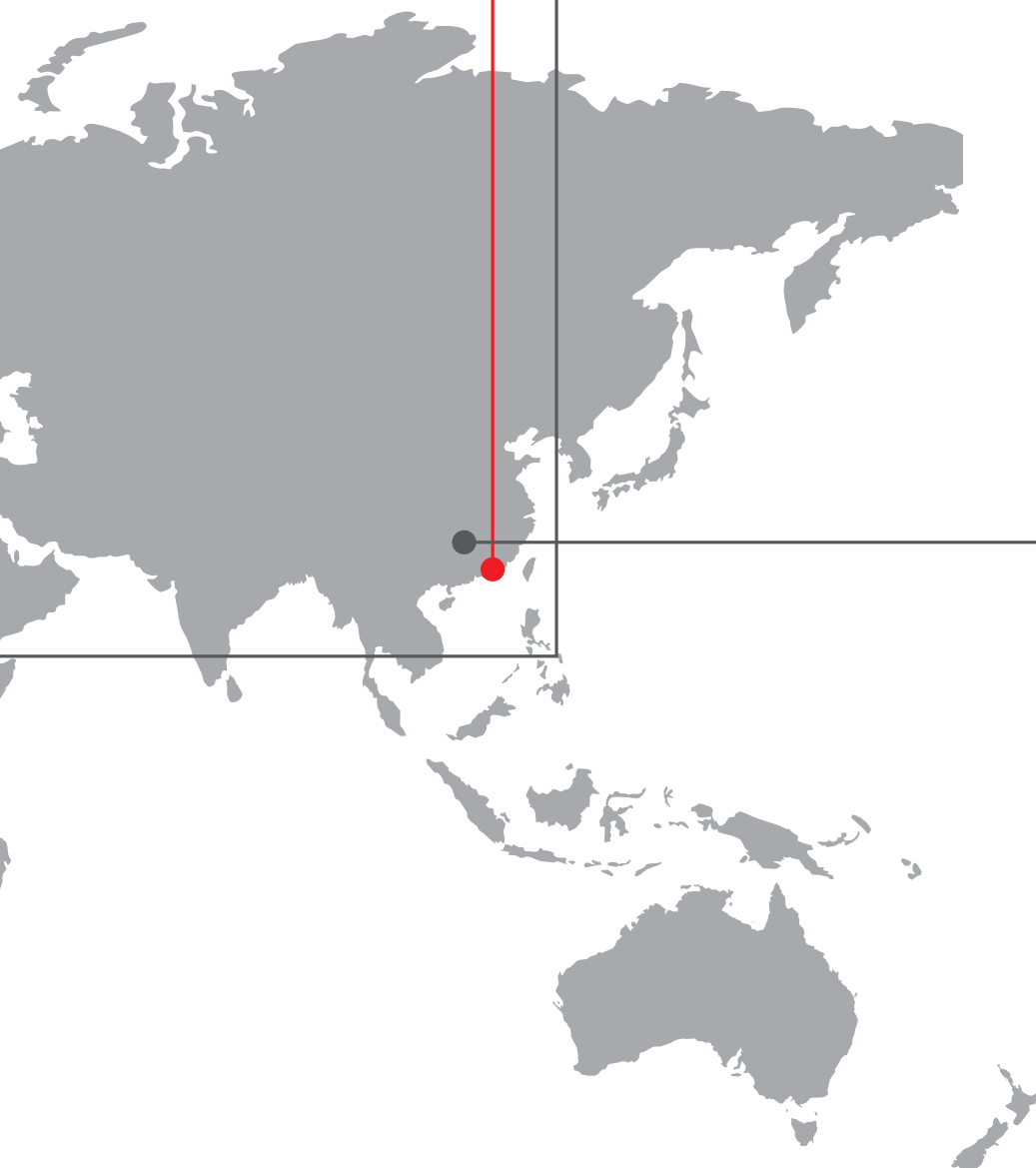
### CHINA - SITE B

Manufacturing of power  
toothbrushes, household and  
industrial brushes, floor care devices  
and baby products



### CHINA - SITE C

Design & development team,  
mold making, injection molding and  
assembly



**HAYCO GROUP**

3002 Citicorp Centre  
18 Whitfield Road  
Causeway Bay  
Hong Kong

**T** +852 2168 9200  
**E** [info@hayco.com](mailto:info@hayco.com)  
**W** [hayco.com](http://hayco.com)

