

World First

LIVING & ULVAC

Tescom's Vacuum Blender

Increased Freshness and Nutrition Through Vacuum Technology

— An Outstanding Product That Meets Customers' Needs and Promotes Health and Beauty
Special thanks to: Tescom Denki Co., Ltd. (www.tescom-japan.co.jp/english/)



Long-lasting Sharpness!
Black Titanium-coated Blade

Make 100% Real Fruit Juice!
Fresh Smoothies Made Using Whole Fruit

Comes with a **Special Recipe Book** Developed with Food Professionals



Product specifications

Product number	TMV1100
Power supply	AC100V 50/60Hz
Power consumption	290W
Product dimensions (mm)	327 (H) × 148 (W) × 275 (D)
Product weight	Main body: 2.2 kg; blender bottle and bottle stand: approx. 1.5 kg; and smoothie bottle: 340 g
Color	S/Silver
Cord length	1.2m
Package dimensions (mm)	365 (H) × 480 (W) × 200 (D)
Package weight	Approx. 4.8 kg
POS code	4975302 883070
Accessories	Smoothie bottle (capacity: 780 ml), lid, brush with spatula, and recipe book

50th
Anniversary
TESCOM

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Tescom, an electronics manufacturer that is celebrating its 50th anniversary this year, launched the first small-size blender in the world to leverage vacuum technology in June 2013. Highly regarded by consumers, this compact blender has proven to be a big hit. These days, consumer electronics manufacturers are competing fiercely for market share by offering a variety of blender models that cater to recent health-related trends. So, why is Tescom's vacuum blender so popular, and what benefits (features) does the use of vacuum technology provide? For this issue of Living & ULVAC, we interviewed the development staff of the manufacturer of this blender, Tescom Denki Co., Ltd. (headquartered in Shinagawa, Tokyo), to find out.

Pursuing Greater Versatility and Sophistication in Home Appliances

Until a few years ago, many home appliances were made to be labor-saving, simple and convenient so that chores would be easier and life at home would be more comfortable. Recently, however, we have seen the launch of a succession of advanced home appliances that focus on delivering versatility and sophistication. Examples of such products include devices that allow you to make soft bread or rice cakes automatically by just adding unprocessed ingredients, robotic cleaners that move freely around the floor as they clean, and even electric fans that produce a comfortable breeze even though they have no blades. Such home appliances are gaining popularity not just because they are practical, but also because they employ ideas that surprise consumers, can be enjoyed and are user-friendly.

With most conventional home appliances, only mechanical features such as the motor were modified and improved, but modern home appliances combine a wide range of sensors (for detecting temperature, positioning, etc.) with computers while leveraging control technologies that are both complex and advanced. This has all been made possible by reductions in the size and price of electronic devices along with an increase in their sophistication. It's no wonder these types of products are also known as "smart home appliances."

The most appealing feature of Tescom's vacuum blender is that, thanks to the application of vacuum technology, it delivers almost everything that a conventional blender could not.

Tescom Denki: The Market Leader for 10 Consecutive Years

Unlike manufacturers of general home appliances, Tescom Denki Co., Ltd. specializes in the manufacture of products for specific fields, such as beauty and kitchen appliances.

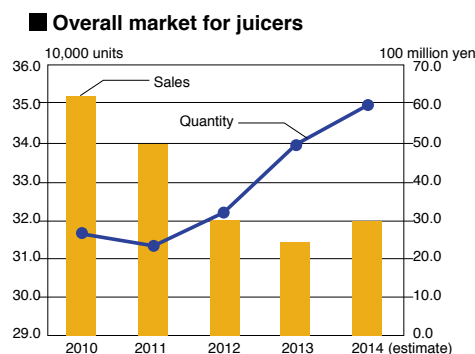
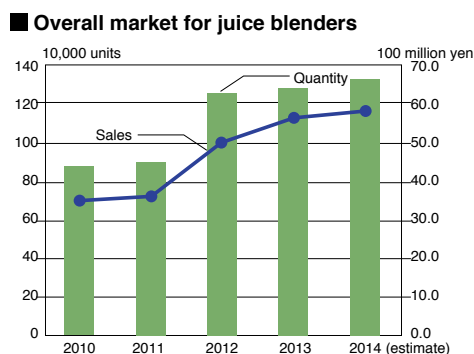
This blue-chip company started out 50 years ago as a manufacturer of hair dryers for hairdressers, barbers, and other hair professionals. Since then, Tescom has expanded its product lineup to include kitchen appliances, such as blenders, toasters, and food processors.

Having first begun selling blenders 30 years ago, Tescom has accomplished significant achievements in this field and led the Japanese blender market for 10 years in a row. The company has been at the top of the fiercely competitive home appliance industry for 10 years now thanks to its unmatched ability to develop products based on a precise understanding of consumers' needs. In fact, the company's development of the vacuum blender was begun in response to requests from users of its products.

Leveraging Vacuum Technology to Take into Account Customer Feedback and Requests

Although the vacuum blender was launched in June 2013, Tescom actually began work on its development three years before that in 2010.

At that time, Tescom had received a lot of feedback and requests from purchasers of its blenders. Product users are always demanding, and the majority of requests were for a blend-



■ Fresh Juice Boom and Revitalization of the Market

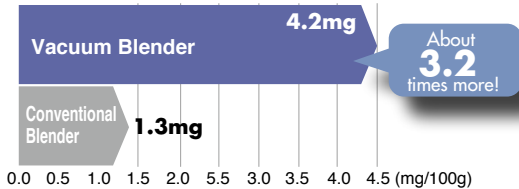
■ The Three Benefits of Vacuum Technology

Benefit 1

Retains Nutrition for Longer!

Nutrients that are prone to oxidation can be effectively protected through the use of vacuum technology. For example, the vacuum blender slows the loss of polyphenols, which have antioxidant properties that prevent body cells from oxidizing, and vitamin C, which enhances beauty and resistance to stress. The blender also slows the loss of vitamin A, lycopene, enzymes and other nutrients.

Amount of polyphenols immediately after juice has been made**



*1 In-house conversion value; comparison of the remaining amount of polyphenols (chlorogenic acid) in a 100-g sample
Laboratory: Japan Food Research Laboratories; test certificate issue date: May 16, 2013; test result issue nos.: 13043953001-01 and 13043953002-01

Benefit 2

Produces an Appetizing Color!

With conventional blenders, smoothies made from apples or bananas quickly discolor. By preventing oxidation, the vacuum blender produces juice with a clear color, which indicates that nutrition has been retained. Juices made with a vacuum blender keep their clear, fresh color for a long time.

Note: Except for the surface, as this is exposed to air.



Benefit 3

Rich and Smooth: Even Dietary Fibers Taste Nice!

Conventional blenders degrade the taste of the juice by mixing in excessive amounts of air. Vacuum technology allows the rich taste of the ingredients themselves to be enjoyed. As less air attaches to the dietary fibers, the juice separates very little and remains smooth for a long time.



er that would eliminate discoloration of the ingredients, prevent the formation of bubbles (as these make it difficult to drink the juice), and keep the juice fresh. Part of a manufacturer's mission is, of course, to meet the needs of its customers, and such feedback also provides an opportunity for the company to differentiate its products from the rest. In fact, Tescom has long had a framework in place that allows such feedback to be quickly sent to its Development Department.

Mr. Hiroshi Akita (General Manager, Product Development Department, General Product Division), who has overall responsibility for the Development Department, had this to say as he recalled the events of that time: "Although some overseas manufacturers had already launched juicers that prevented discoloration and retained nutrients by slowly squeezing the ingredients, we felt that there was still a lot of room for improvement. Given this, we started a new round of product development to deliver a better blender."

It is the structure of conventional blenders that results in discoloration of the ingredients and the formation of bubbles. The reason this happens is because churning the ingredients in the air results in a large amount of air (oxygen) being fed into the mixture. In other words, the more the ingredients are mixed, the more discolored and oxidized the mixture becomes.

In explaining why Tescom decided to adopt vacuum technology, Ms. Rie Arai (Supervisor, Product Planning Section, Product Development Department, General Product Division) said: "We tried crushing apples slowly in a vise and other such tools and found that this method did not cause extreme discoloration. So, we [the Development Department] concluded that we should vacuumize the blender container to prevent the ingredi-

ents being exposed to air as they are mixed."

However, although vacuum technology could obviously be used in expensive large-scale industrial equipment, its use in home appliances seemed impractical when costs and technological issues were taken into consideration. Nevertheless, Tescom's development team rose to the challenge.

Vacuum Technology Offers Surprising Benefits—

As this was uncharted territory for them, the development team constantly encountered new challenges in the early stages of development, such as how to achieve airtightness, what degree of vacuum would be required, what kind of vacuum pump should be used, how strong the glass container would need to be, and how big the main body of the blender should be. The team overcame this mountain of challenges by addressing them one by one. Another problem they faced was that they now had to find solutions to problems that could be ignored for mixing in air, but not for mixing in a vacuum.

After three years of trial and error, Tescom announced its development of the Vacuum Blender TMV-1000 to the media on June 20, 2013, and launched it the next day. Its price varies depending on the retailer (current market price: 29,800 yen), but the product includes the blender itself, a bottle that can store juice in a vacuum, a spatula with a brush, and a special recipe book.

Operating the blender is simple. All you have to do is push a button to vacuumize the container (about 0.3 atmospheres) and then blitz the ingredients. Because the ingredients are mixed in a vacuum, they do not discolor at all. In addition, no bubbles are formed, which means that the mixture leaves a smooth feeling

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on the tongue. Another feature that has proven popular with customers is that it is no longer necessary to dispose of the highly nutritious marc—this can instead be used to make a smoothie. Tescom’s vacuum blender truly does meet almost every conceivable customer need.

The use of vacuum technology was also found to offer some surprising benefits.

In comparing the remaining polyphenol content in a 100-mg sample, Japan Food Research Laboratories found that the vacuum blender retains about 3.2 times more antioxidant polyphenols (4.2 mg) than a conventional blender does (1.3 mg). Furthermore, the difference in the preserving properties of these blenders was even more pronounced after 24 hours, with the vacuum blender retaining about 56.3 times more antioxidant polyphenols than a conventional blender. The vacuum blender also retained 15% more vitamin C, which is highly prone to oxidation.

The benefits of vacuum technology came as a double surprise, then, as this technology not only overcomes the disadvantages of conventional blenders (such as discoloration of ingredients and formation of bubbles), but also—as the analytical data shows—makes it possible for the nutrients of fruits and vegetables, which are prone to degradation, to be retained fresh until the juice is consumed and for the juice to be stored for later consumption.

Development of a Strategy for Increasing Vacuum Blender Sales Based on the Collective Wisdom of Tescom’s Young Female Employees

Another challenge for home appliance manufacturers is that the success of a sales drive depends not just on how well the product performs, but also on how the product is marketed to consumers. Generally speaking, the blender tends to be the home appliance that is most often put away shortly after it has been purchased. To ensure that users can enjoy using the blender every day, the development team took into account usability, ease of storage, and design. They even created a recipe book in cooperation with food professionals to help users make the most use of the vacuum blender.

In charge of the product strategy, Ms. Yukako Morishita (Assistant Manager, Marketing Section, Product Strategy Department, General Product Division) explained: “The average user of this product is unfamiliar with vacuum technology, even though it’s the main feature we want to emphasize. Although our advertising budget was limited, we gave a lot of thought to how we could raise awareness of vacuum technology.”

In addition to the recipe book that comes with the blender, the team also used social media such as YouTube and Facebook to provide new recipes in real time using a variety of ingredients. Recipes that particularly stand out are those that use specialty products from Matsumoto City (Nagano Prefecture), where the company’s factory is located. They also used a character called



Tescom’s friendly Shinkuu character appears on its Facebook page.



<https://www.facebook.com/tescom.shinkuu>



The Development and Sales Promotion Team (Mr. Hiroshi Akita, General Manager, Product Development Department, General Product Division; Ms. Rie Arai, Product Planning Section, Product Development Department, General Product Division; and Ms. Yukako Morishita and Ms. Yukari Fukutomi, Marketing Section, Product Strategy Department, General Product Division)

“Shinkuu” (meaning “vacuum”) in social media to help familiarize consumers with the concept of vacuum technology.

Ms. Yukari Fukutomi (Marketing Section, Product Strategy Department, General Product Division), who works in the same section as Ms. Morishita, emphasized that the character was handmade, saying: “Ms. Morishita made the basic design for the character, and I bought the felt and other materials to make the original doll. We created everything, including the movies posted on social media sites.”

This demonstrates how all of the company’s employees have, since its launch, remained committed to increasing sales of the vacuum blender as a single team. The provision of recipes on social media sites offers the best customer service for users of the blender, and we hope that users will add their own unique recipes, too.

Part of Tescom Denki’s corporate slogan is “Lighting the Way to a Brighter Future by Growing Together,” and as the company enters the 50th anniversary of its founding, it aims to enrich people’s lives by continuing to evolve its vacuum blender through incorporating requests from not only users in Japan, but also new overseas users.