



New Squeeze Nebulizer Contest

Summary

New product design contest on Desall.com: Desall and a multinational leader in the packaging industry invite you to design a new squeeze nebulization system for liquids specifically designed for disposable bottles.

Official page: <https://bit.ly/Squeeze-Nebulizer>

Company description

This competition is sponsored by a prominent multinational company specializing in dispensing technologies in the packaging industry.

What we are looking for

Our goal is to find a new mechanical dispensing system that can nebulize liquids into the air through the compression (squeezing) of a dedicated area, a specific component, or the entire disposable bottle. The proposed solution must offer an innovative mechanism or type of interaction that sets it apart from the current market offerings, with a focus on environmental sustainability and minimizing the number of components needed for operation.

Guidelines

To ensure the proper development of your projects, please consider the following guidelines:

Product typology

Nebulization is the process of reducing a liquid into very small droplets, which can be achieved by passing it at high speed through narrow channels with particular geometries or by subjecting it to an air jet.

We invite you to design a **mechanical nebulizer** that operates differently from aerosol nebulizers. Unlike aerosol nebulizers that rely on the pressure of gas inside the bottle, the proposed mechanical nebulizer must push and nebulize the liquid through the mechanical compression of the dispenser.

The user interaction should involve **squeezing** a specific **deformable part** of the dispenser (e.g., the entire bottle, a dedicated area, or a specific component), to push the liquid out. **Please note that solutions involving spray pumps activated by pressing a button will not be considered.**

Please refer to the [*Inspiration*](#) section of the contest for examples of similar products and patents.

There are no constraints on the configuration of the elements with which the user will interact to nebulize the liquid, but it should be **practical to dispense with one hand**. You may include the **bottle** containing the liquid in the project if it is a **functional part of the dispensing system**; otherwise, its design is optional.

The system will mainly be used in an upright position, with the nebulizer spray directed upwards. Ideally, the dispensing system should allow for nebulization of the liquid even when upside down, although the ideal condition is for the system to operate in all directions, 360°.

The system must be leak-proof, preventing accidental spillage when turned upside down or exposed to vacuum.

Overall technical feasibility is a critical consideration for the nebulizer's design.

Usage mode

Consider the product's usage mode when designing the dispensing mechanism. Explore alternative interaction modes and nebulization systems to current dispensing methods. Activate the dispenser by **compressing** (squeezing) a specific **deformable part** (the entire bottle, a dedicated area, or a specific component) that pushes the liquid out of the bottle. **Avoid solutions that involve spray pumps activated by a button press.**

Check out the [Inspiration](#) section of the contest for examples of similar products and patents.

Eco-compatibility

You are invited to propose solutions that **minimize the number of components** in the dispensing mechanism and provide **easy disassembly**. Currently, traditional nebulization systems have nine parts, and some recently designed ones have four parts. The number of required parts should be around four or lower. Ideally, the parts should be designed with reduced material usage.

Materials and production technologies

Preferably, recyclable thermoplastic materials such as **PE** and **PP** should be used. The use of PET is allowed, but it is not the ideal solution as it has a lower recyclability percentage. You are free to propose the use of other types of recyclable plastics, provided that they are compatible with mass production technologies, particularly injection moulding. The use of other materials such as metals or non-recyclable plastics is not allowed. **The entire dispensing system and its individual components should preferably be made of a single material.** Co-moulding is allowed if it does not compromise the recyclability of the product.

The parts will be produced through injection moulding or extrusion.

Stile

The product's **style or aesthetics are not the focus of this contest**. Solutions that prioritize aesthetics over functionality will not be considered.

The solution sought is for the cosmetics, food, and hygiene sectors.

Dimensions

The product should be ergonomically designed for one-handed use, and the attached bottle should not exceed a capacity of 0.5 litres. No specific size constraints apply beyond these requirements.

Target audience

The dispenser design is targeted towards B2B customers operating in the cosmetics, food, and hygiene sectors. They will purchase the dispenser to market their products in the mass market.

Production cost

Your proposed dispenser should have the lowest possible production cost and be suitable for sale in the mass market. This can be achieved by reducing the number of components required for operation and adopting cost-reducing solutions in the design.

Required materials

Provide detailed descriptions and a series of images to present your projects effectively. The images visible in the gallery (up to 5) should have a 4:3 proportion, with accepted file formats being .jpg, .gif, or .png. The colour mode should be RGB, and the maximum size of a single file should be 1MB. **For a better understanding of the project, you are encouraged to present at least one section and an exploded view of the mechanism, accompanied by a detailed description of the dispensing system's operation. You are also invited to upload a .zip archive containing 3D files and high-resolution images of the proposals during the project upload phase.** The maximum size for the .zip file is 100MB.

Judging criteria

The entries will be evaluated based on the following criteria:

Technical feasibility 5/5

Economic sustainability 5/5

Eco-friendliness 5/5

Degree of innovation 4/5

Functionality and usability 4/5

Language

English - Desall is an international community, so all texts (abstract, description, tags, etc.) must be written in English.

Contest timeline

Upload phase: 9 March 2023 - 11 July 2023 (1.59 PM UTC)

Concept review: 8 June 2023 (1.59 PM UTC)

Client vote: from 11 July 2023

Winner announcement: tentatively by the end of September 2023

Concept review (optional)

Participants have the opportunity to request an optional review of their project by the Desall team by the date indicated above. To do so, they must 1) save their project as a draft from the upload page and 2) send a request to the Desall team via email at contest@desall.com or through the contact form. **The review is not mandatory** and only provides an opportunity for participants to receive feedback but does not constitute a necessary condition for participation or provide any advantage in the final evaluation by the Sponsor.

Participation criteria

Participation is free and open to creative talents of any nationality aged 18 or older. Participants may submit one or more projects, but only projects published on the website www.desall.com from the upload page dedicated to the contest will be accepted.

Award

1°: €5000

The selection of winners will be the result of an indisputable evaluation by the Sponsor. Originality, feasibility, and coherence with the brief will be taken into consideration.

Extra Award (option right)

€2500

Throughout the duration of the option right, the Sponsor offers an additional opportunity to all participants by setting the compensation of €2500 for the purchase of the license for the economic exploitation of projects not recognized as winning proposals. For more information, log in and read the [Contest Agreement](#) from the upload page. For questions about the brief, use the “Have a question” button or write to contest@desall.com.

Submission Guidelines

Project images: the first image attached from the upload page will also be used as the preview of the project in the gallery. In order to better present your project and draw the attention of the sponsor, we suggest you to choose a content that provides an overall idea of the whole project in one single image, briefly including all the contents that will be further presented in the following images.

We also suggest you to use all five image slots available from the upload page of the contest and - where possible - to present several views of the project giving also an indication of the main dimensions of the product.

For product design contests in particular, we suggest you to include at least one image with your project on neutral background and no writings.

For the rendering and presentation of your project, the use of copyrighted images, even if slightly edited, is prohibited.

In case of using materials owned by third parties (ex. stock images, stock videos, texts, etc.), make sure you are granted all the licenses needed for participating in the contest, as further specified in the Contest Agreement.

In case of submitting multiple projects or concepts, you have to repeat the upload procedure for each project: do not submit multiple projects with a single submission.

You are required to upload at least 1 image; image ratio: preferably 4:3; allowed file formats: .jpg, .gif or .png; colour mode: RGB; maximum file size: 1MB.

Descriptions: we suggest you to use the appropriate fields, “Abstract” and “Description”, to include all textual information about your project. We discourage you to include textual description inside your images, as they might result difficult to read (at all events, we suggest you to include at least one image - if possible - with your project on neutral background and no writing). In the “Abstract” field you have maximum 500 characters to include a short summary of your project while in the “Description” field you can include all the remaining information.

Additional material: in addition to the project images, you are invited to attach further materials in a .ZIP archive (NO other file extensions are allowed, such as .RAR) through the “Archive File” field on the upload page. Among the various materials, you may include CAD files, PDF with further descriptions on the project, photos of any models or prototypes, high-resolution images of the project images and 3D files (preferably in .stp or .igs format - you may also include a PDF 3D file for a rapid visualisation). The maximum size of the .ZIP archive is 100MB. You may also attach a video presenting your project through the “Video File” field from the upload page, including it inside a .ZIP archive with a maximum size of 50MB.

Concept revision: revision of your project by the Desall team. In order to request a revision, upload your project including the description and save it as draft (SAVE DRAFT) from the upload page and send your request to the Desall Team via e-mail or through the contact form. The revision is NOT mandatory: it serves only as a further opportunity for the participants but does not constitute a condition for participation, nor does it constitute any advantage in the final evaluation.

Hidden option: only in case of public gallery contests, you can submit your project with “hidden” design privacy option, provided that you submit your project within the first half of the upload phase. By doing so, your project will remain hidden for all other users until the opening of the Community Vote, if any. At all events, your project will always be visible for the Sponsor regardless of the submission date. This option is automatically disabled once the first half of the upload phase has expired: you can find the deadline for activating this option in the Optional deadlines paragraph inside the brief.

You can find further instructions on how to create your account, how to submit your project and other information in the [Tutorials](#) and in the [FAQ](#) sections.