

Completely Airless, or Air Doesn't Stand a Chance!



# Just ask us!

**Aero Pump.** This company name has been associated with the development and manufacture of atomizer pumps and dispensers since 1976. Customers in the pharmaceutical and cosmetic industries and other fields of application prize our very high product quality.

There are three main reasons for this:

**Customer orientation.** Innovative and individual solutions can result only from very intensive cooperation.

**Employees.** Together with our customers, they are the key to our success. Flat hierarchies foster personal responsibility and entrepreneurial thinking.

**Continuous improvement.** It goes without saying that we have a Quality Management System (DIN EN ISO 9001:2000) and an Environmental Management System (DIN EN ISO 14001: 2005) and that we're guided by the Business Excellence Model of the European Foundation for Quality Management (EFQM). But it's ultimately our employees who've proven themselves as the deciding quality assurance factor.

In 2001, we acquired a production site in Hochheim, Germany, the place where our company was founded. Pumps with different types of seals and dosing systems are produced there under clean room conditions (ISO class 7 and DIN ISO EN 14644-1) and the rules of Good Manufacturing Practice (GMP).

**Aero Pump is a professional contact resource both for special product solutions and the development of complete systems – together with our strategic partners.**



In 2001, Aero Pump constructed a new building in Hochheim, Germany.



Atomizer pumps are produced under clean room conditions and GMP rules.

## Our filling partner ASM

is an established, independent and internationally oriented filling and formulation contractor for pharmaceutical, cosmetic, and other industrial products. ASM fills standard aerosols, two-chamber systems, sticks, airless products, bottles, and other containers. The company is certified according to ISO 9001-2000 and GMP and operates within the pharmaceutical area under Class D clean room conditions.

[www.aerosol-service.com](http://www.aerosol-service.com)

# Do you want complete systems?

Permanent innovations are often characterized by “system thinking.” This is exactly what our airless atomizer pump represents. Two new “complete systems,” POLYFAERO® and AeroLin, arose out of a combination of three clever packaging ideas.

But what exactly is an “airless” atomizer pump? It means that this product does not allow any outside air into the container. Oxygen, which could alter the chemical consistency of the container contents, cannot get in.

The airless atomizer pump comes in two types: the standardized spray nozzle and the slightly more special cream nozzle.

The **spray nozzle** is suitable for liquids of nearly any type, even oils (we nevertheless recommend a discharge test for oils because of their different viscosity). On each actuation, the product produces a very fine spray pattern in which 0.14 milliliters is consistently emitted.

The **cream nozzle** is designed to discharge high-viscosity media, such as creams, gels, and lotions. For a medium with a viscosity of around 25,000 mPal, it's possible to consistently discharge 0.15 milliliters. Advance testing is also reasonable here.

What the two systems have in common: They can be used in every position (360 degrees) so that a wide application spectrum is possible.



Together with the atomizer pump, the spray nozzle – suitable for liquids of nearly any type, even oil – makes possible consistent emission of 0.14 milliliters.



The cream nozzle is designed to discharge high-viscosity media, like creams, gels, and lotions: consistent discharge of 0.15 milliliters upon each actuation.

# The “Three-Layer Secret”

A complete packaging solution: **POLYFAERO®**. The tube with the airless atomizer pump dispenses creams and liquids for the pharmaceutical and cosmetic industries. It's available in various volumes and tube diameters.

Light protection and corrosion resistance are two of the outstanding properties of this product. These properties derive from three layers, which consist of polyethylene and aluminum. The layers also ensure resistance against organic and chemical substances.

The “polyfoil laminate tube” (product name **POLYFAERO®**) has three protective layers made of polyethylene and aluminum that provide very good light and corrosion protection for cosmetic creams and other liquids.



Together with the atomizer pump, **POLYFAERO®**, the “Polifoil Laminate Tube,” offers excellent light protection and corrosion resistance for pharmaceutical and cosmetic cremes and other liquids, features made possible by three protective layers of polyethylene and aluminium.

## Our Development Partner **NEOPAC Packaging Solutions**

The company produces innovative laminate and plastic tubes and devices (application systems). Customers are globally active companies in the pharmaceutical and cosmetic industries.

[www.neopac.ch](http://www.neopac.ch)

## **POLYFAERO®** volume and tube sizes

50 milliliters – 30 x 110 millimeters  
75 milliliters – 35 x 120 millimeters  
100 milliliters – 40 x 120 millimeters  
150 milliliters – 40 x 170 millimeters

All types available for orders of 10,000 or more.

## **POLYFAERO®'s advantages at a glance**

- Keeps oxygen from penetrating
- Extremely user friendly in every position (360 degrees)
- 95-percent utilization of tube contents
- Customer-specific or sales-market-oriented design
- Wrap-around imprint (with invisible seam) – in offset print (with coating), digital print, and relief
- The picture and text still remain visible on the empty tube



**POLYFAERO® – The “light protection factor” for your creams and liquids!**

# The "Sensitive One" with the Sweet Lips

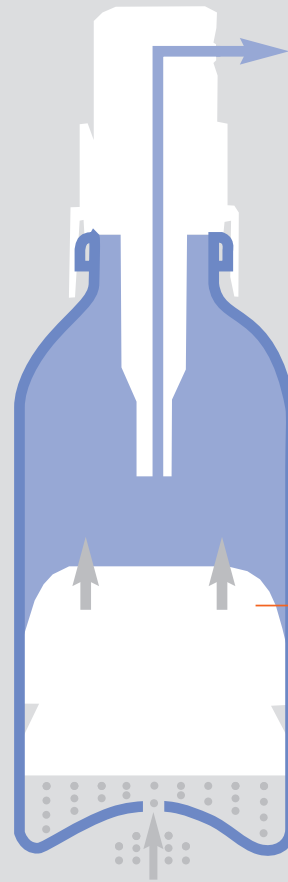
The intelligent can with a strong seal: AeroLin.

What makes it so intelligent, or better yet, sensitive?  
How can this product prevent any contamination?  
The answer can be found in the overall system.

First and foremost, AeroLin consists of an aluminum can that provides the required light and moisture protection. An internal protective coating can be provided if required – primarily PAM or Epoxy-phenol resin.

The second special feature: The patented double-lipped piston. This piston offers product protection: A protective sealing gel is located between the double lips.

The airless atomizer pump forms the third system component. Its valve mechanism keeps the container airless – without active back pressure.



Pressure and underpressure. These two technical terms are the simplest way to explain the principle of the AeroLin can, whose technical secret is a patented double-lipped piston. A sealing gel separates the two sealing lips, but also protects the container from unwanted outside air.

## Our Development Partners

### Lindal Group / Vervaline AG

Whether for hair or asthma spray or polyurethane foam, the Lindal Group manufactures valves, spray heads, and spray caps for diverse types of aerosol products. Aero Pump has combined the patented double-lipped system with the airless pump. For the Lindal Group, Vervaline AG assumes responsibility for this integrated building block. Vervaline is also involved in distribution. [www.lindalgroup.com](http://www.lindalgroup.com) [www.vervaline.ch](http://www.vervaline.ch)

### Linhardt

The Linhardt Group manufactures aluminum and plastic tubes, tubos (for example "cigar tubes"), aerosol and screw-cap cans, special shapes, and aluminum cartridges. It not only delivers the aluminum can for Aero Pump, it also assembles the double-lipped pistons. [www.linhardt.com](http://www.linhardt.com)

## AeroLin Volumes and Can Diameters

40 milliliters – 35 millimeters  
60 milliliters – 35 millimeters

All types available for orders of 10,000 or more.

## At a glance – AeroLin's advantages

- Keeps oxygen from penetrating
- Extremely user friendly in every position (360 degrees)
- Two different nozzles: spray nozzle and cream nozzle
- 95-percent utilization of tube contents
- Customer-specific or sales-market-oriented design
- Wrap-around imprinting
- Fillable at any conventional aerosol plant



**AeroLin – The sharp-looking, airless can!**

[www.aeropump.de](http://www.aeropump.de)



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