

WHY IT'S VITALLY IMPORTANT TO FILTER SOLIDS FROM LIQUIDS BEFORE THEY REACH YOUR SPRAY NOZZLES

Ronningen-Petter Engineered Filter Systems

PREVENTS CLOGGING

Unwanted, oversize particles can easily block the inside of an orifice. This restricts liquid flow and impairs spray uniformity. Ultimately, the nozzle will plug, making it totally ineffective. Proper filtration will help keep the nozzle clear of debris for uniform flow and consistent spray patterns.

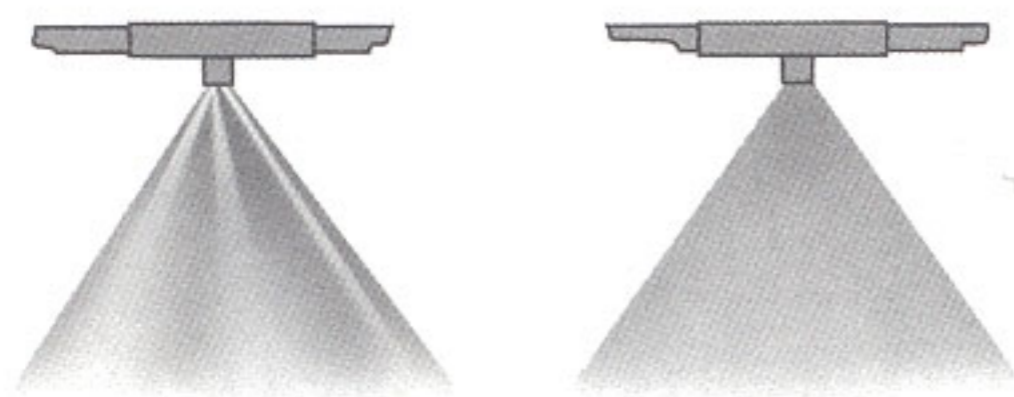
STOPS UNNECESSARY WEAR

Solids gradually wear open flow passages and orifices on spray nozzles. This is a problem because the orifice shape is precisely engineered to create a specific spray pattern and flow at a given volume and pressure. Distortions due to wear simultaneously increase flow, decrease pressure, make the spray pattern irregular, form bigger spray droplets, and allow debris to pass through which, in turn, ends up in your process or on your product. Filtering out unwanted solids reduces wear and tear on the orifice, ensuring longer life for the nozzle, better spray consistency and quality and a cleaner process or product.

AVOIDS CAKING

Unwanted solids, when not filtered out, can remain on the nozzle and cake when liquid evaporates. This caking obstructs the orifice and internal flow passages. By preventing caking, filtration reduces downtime for nozzle cleaning and replacement.

Clogged, worn, or caked spray nozzles can be costing you money and affecting your product quality in ways you won't even notice...until it's too late.



Clogged or caked nozzles result in uneven, inconsistent flow patterns. Proper filtration, however, prevents these problems.

Spray nozzles are precision components designed to do precision jobs. As such, a "small" problem with a nozzle can easily go unnoticed until it shows up as a big and obvious problem in the process or product.

So merely keeping nozzles open is not enough. They must be kept completely clear of debris so they can do the job they were intended to do.

Nozzles are specifically engineered for four critical functions. They are:

1. **Flow control** – Metering liquid flow by providing a specific flow rate at a given pressure.
2. **Cleaning** – Changing line pressure from a low-velocity to a high-velocity stream.
3. **Coverage** – Providing a precisely controlled spray pattern.
4. **Atomizing** – Breaking up liquid into very small droplets.

Filtering out unwanted solids is the *only way* to keep nozzles operating according to specifications. And when nozzles operate according to specs, there's no clogging, wearing, or caking. This, in turn, prevents damage to your product or process quality due to changes in flow rate and pressure, the formation of oversized droplets, decreased spray coverage, and inconsistent spray patterns.

RONNINGEN-PETTER OFFERS THE WIDEST CHOICE OF TUBULAR AND BAG FILTERS FOR SPRAY NOZZLE PROTECTION

Ronningen-Petter offers the widest selection of tubular and bag filters for removing trace contaminants in particle retention levels from 10 mesh to 1 micron.

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TUBULAR FILTERS

The tubular product line includes:

- > Single Filters for batch or intermittent service.
- > Duo Filters for continuous service.
- > Multiplex Filters for continuous service with internal or external backwashing.
- > Automated Multiplex Filters for automatic backwashing, unattended service and improved process control.
- > Vibrating Slurry Filters for high-solids slurries.
- > Sanitary Filters for the food and beverage industry.
- > High-Pressure Filters for liquids under pressures as high as 1,000 PSI. Also, Custom-Built Filters.

All of these filters feature a unique gasketing arrangement which prevents unwanted solids from bypassing the media and clogging or damaging spray nozzles. There are no O-rings that can break or cartridges that can collapse under high pressure and allow the liquid to bypass.

These filters are available with a wide variety of media. This includes wire mesh from 10 mesh to 700 mesh, fabric from 30 mesh to 1 micron, slotted from 10 mesh to 25 micron, perforated from 10 mesh to 30 mesh. Also available are Tri-Cluster® elements, which feature 510 square inches of surface area – 40% more screen area than any single screen of comparable size.

LOW-COST BAG FILTERS

Ronningen-Petter's Bag Filter and Strainer line includes:

- > Single Filters for batch or intermittent service.
- > Duo Filters for continuous service.
- > Fabri-Plex Filters for high flows and batch or continuous service.
- > Multiple-Bag Filters for high flows with minimum floor space.
- > Compact Model 152 Filters for handling small jobs at low cost.

These Filters are available with reusable media made of tough, woven, non-shedding polypropylene, nylon, polyester, Teflon® and Nomex® from 30 mesh 1 micron; disposable media made of felt or bonded nylon, bonded polyester and polypropylene from 250 mesh to 3 micron; and permanent media made of 316

stainless steel (wire mesh and perforated) from 1/2-inch to 700 mesh.

WHICH MEDIA IS RIGHT FOR YOU?

For spray nozzle protection, careful media selection is essential. Media that's too coarse, for example, won't provide the protection that's needed. But specifying finer media than necessary "just to be on the safe side" can add substantially to both equipment and operating costs.

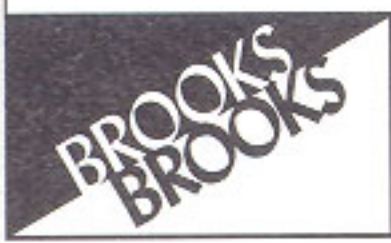
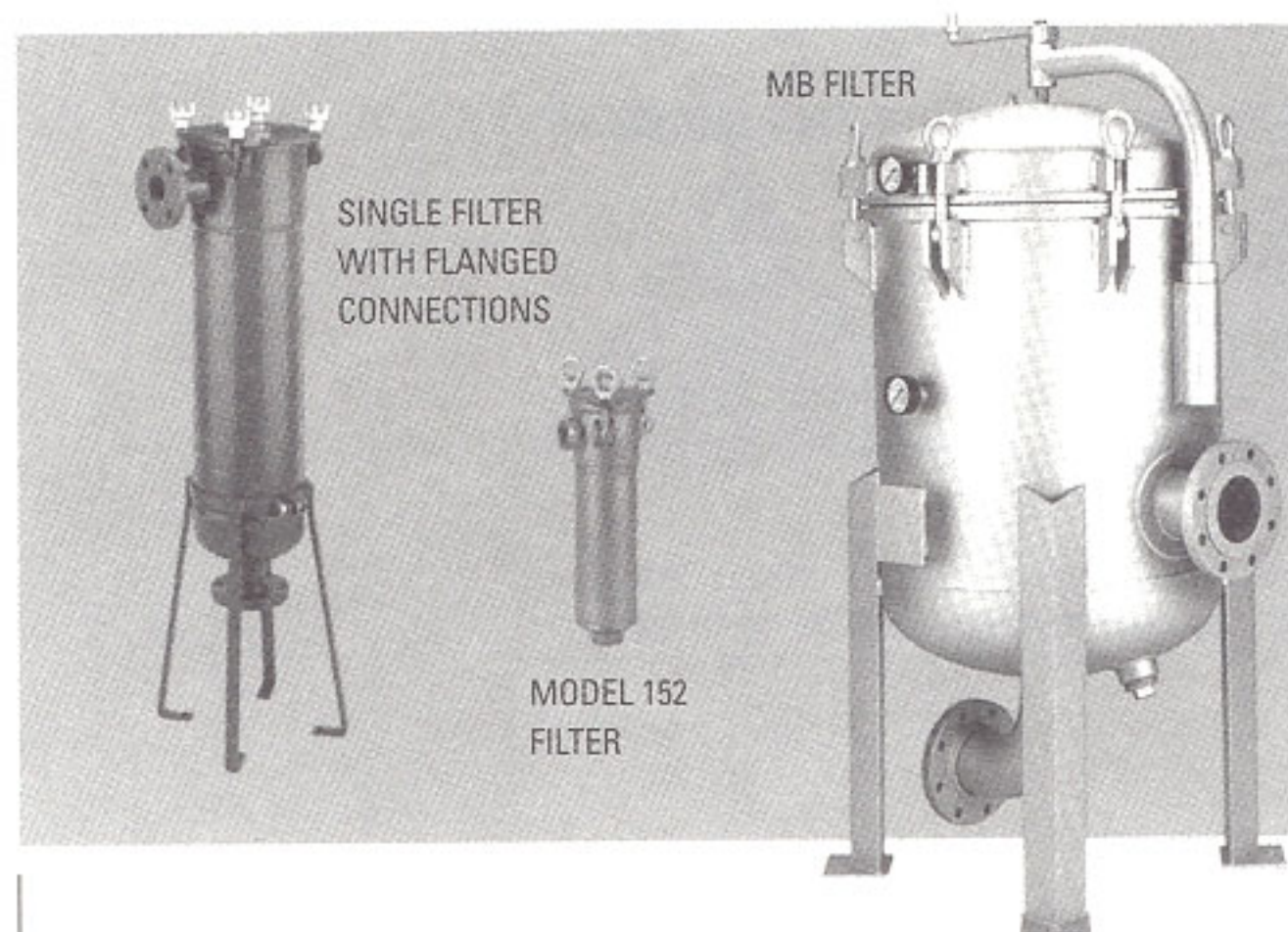
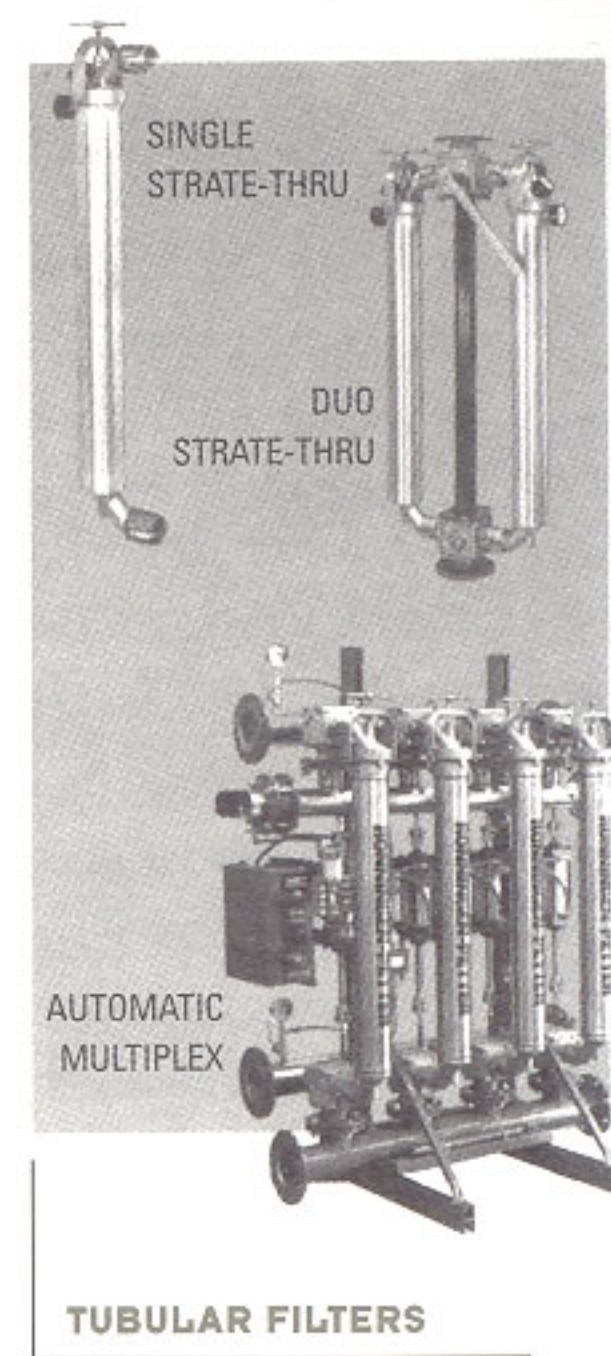
Primary factors to be considered in media selection are orifice size and shape. Other factors include solids content, type of contaminant, particle size and shape, amount of contaminant to be removed, viscosity, corrosiveness, abrasiveness, adhesive qualities, liquid temperature and required flow rate.

Your Ronningen-Petter representative is a technically trained professional who can consider these and other factors in suggesting the right media for your application.

WANT TO KNOW MORE?

Of course, this is just a glimpse at Ronningen-Petter, a company with 40 years' experience in the business, our filters and filter media. If you would like more information on any equipment described in this brochure, contact us by phone or mail.

There's no obligation. So why not do it right now while you're thinking about it? It's an easy way to prevent a small spray nozzle problem from turning into a big and costly one down the line.



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