

High Flow Vibrating Filter



Vibrating Filter Features

- 316 Stainless Steel Construction
- Working Pressure to 200 PSI (14 Kg/cm²)
- Vibrator Air Requirement: 6.5 SCFM @ 20 PSI
- 316 Stainless Steel Filter Media
- Flow Rates to 135 GPM per Vessel (511 L/min)
- Multi-Tube Systems for Higher Flow Rates are Available
- TFE O-Ring Seals
- Commonly Used in Industrial E-coat Applications (E-coat also known as Electrocoat or Electrodeposition)

General Applications

The Nowata-ProGuard Filtration Vibrating Filter is designed for particle size control when filtering fluids with high solids concentration. The vibrating action of the unit causes a significant reduction in bridging, caking, and other physical problems that are common when filtering paint, inks, paper slurries, and other fluids with high solids.



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Consistent Fluid Filtration

High Flow Vibrating Filter Performance

In many industrial situations today, there is a need to use fluids that are complex and, therefore, very difficult to handle. Conventional filtration methods cannot deliver the consistency needed for the quality levels demanded.

The Nowata-ProGuard Filtration Vibrating Filter addresses these problems for clean, consistent fluid delivery. The filter element, using plant air at 20 psi, vibrates with a high frequency and low amplitude to keep the oversized retained particle "bouncing" off the filter element surface. This creates flow paths of constant micron size through which the proper size particles can readily pass. It retains oversized particles, without pyramiding and bridging, and allows the proper sized particles to pass through the filter, and since the element is made of stainless steel, it is unaffected by pressure increases.

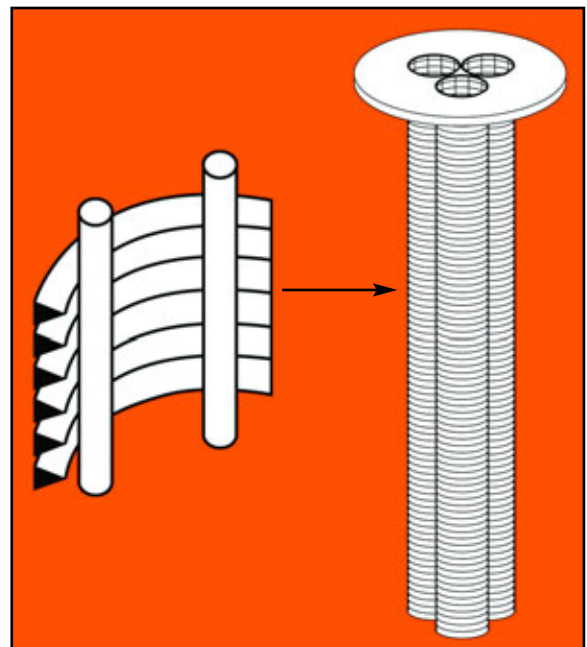
The Problem with Bag and Cartridge Filters

With conventional bag and cartridge filtration, retained particulates bridge and plate over the flow paths. So the filter removes progressively smaller and smaller particles until desirable size material is also removed. Increasing pressure can cause the bag to stretch or even tear, allowing larger contaminants to flow downstream. The Nowata-ProGuard Filtration, High Flow Vibrating Filter eliminates all of these problems to deliver consistent filtration.

The Unique Design

The Nowata-ProGuard Filtration, High Flow Vibrating Filter is equipped with a Multi-Cluster element, which consists of eight slotted tubular screens attached to a common flange. These screens are made of 316 stainless steel wedge-shaped wires, wound to precise tolerances and continuously welded to vertical spacer bars. Together, they form an element that will deliver the consistent fluid flow and provide years of maintenance free service.

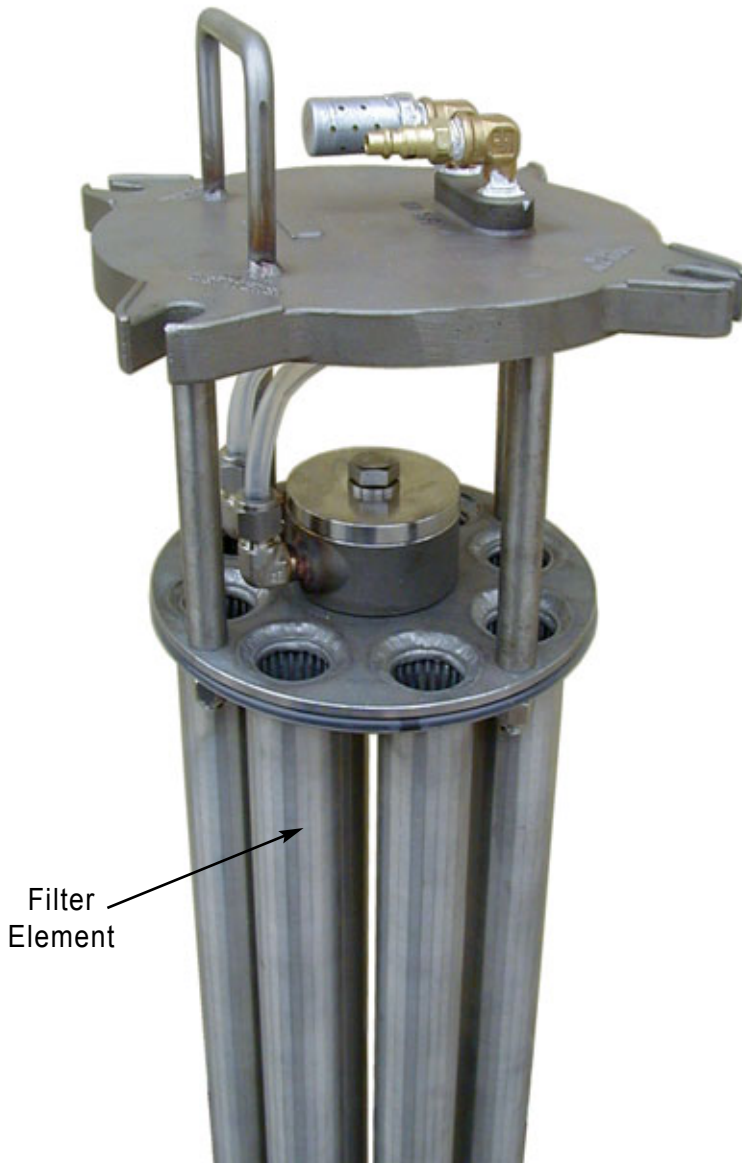
The unique bottom to top flow pattern of the Nowata-ProGuard Filtration, High Flow Vibrating Filter means large solids are constantly in suspension, while fluid with the correct size particles is consistently flowing.



Automotive E-Coat
Vibrating Filter.
A High Flow Rate,
Multiple Tube System



Filtration Through Vibration



Filter Element

U.S. PATENT NO. 5,455,738

The high flow vibrating element allows the correct size solid particles to flow through the filter element. Unwanted oversize particles are not allowed to pass through the filter element. Vibrating keeps these particles from building up on the media, preventing flow cut off.

The Vibrating Filter Element

Vibrating elements keep all solids in suspension as they "bounce" off the filter surface. Correct size particles eventually pass through the media.



Unwanted, oversize particles cannot pass through the filter media. The result is a clean, consistent, contaminant free fluid.

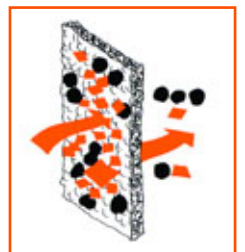


The Problems with Bag & Cartridge Elements

Since the fibers in felted filter media are randomly distributed, they create a wide range of opening sizes. This allows some of the larger, unwanted particles to pass through. At the same time, many smaller, desirable particles are also trapped.



As build-up occurs on the felt surface, more and more smaller particles are filtered, thus breaking down the entire filtration process.



Standard Construction for the High Flow Vibrating Filter

Specification and Application Data for the Nowata-ProGuard Filtration High Flow Vibrating Filter

Operating Limits

Recommended maximum housing flow
..... 135 GPM per vessel (511 L/min)
(Flow Rate Limited by Micron Rating)
Maximum pressure
..... 200 PSI (14 kg/cm²)
Maximum temperature
..... 325°F (163°C)

Air Requirements

6.5 SCFM @ 20 psi

Air Connections

1/4" NPT

Auxiliary Connections

1/4" FNPT blowdown
1/4" FNPT drain/purge

Materials of Construction

Filter: 316 stainless steel
(low carbon)
Gaskets: TFE Encapsulated
Viton

Inlet and Outlet Connections

Standard:
.....2-1/2" MNPT
Optional:
.....3" socket weld
.....2" sanitary
.....2" FNPT
.....2-1/2" flange

Options for Vibrating Filter

- Passivation per mil spec.
QQ-P-35C
- Electropolish all wetted parts
- Sanitary or custom inlet/outlet connections
- Point of use air filter/regulator
- Bag conversion assembly for system cleaning: bags available 5-230 microns
- Custom retro-fit pipe assemblies

Standard Micron Ratings

XXX = Micron Size
010 = 10 Micron
025 = 25 Micron
050 = 50 Micron
075 = 75 Micron
100 = 100 Micron
125 = 125 Micron

Additional Micron
Retentions Available

**All Elements Are
Profile Wire Type**

Due to our continuing program of product improvement, specifications are for reference only and subject to change without notice.



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