The NMW 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.

Vibrating Filter Features

- All 316 Stainless Steel Construction
- Working Pressure to 300 PSI (21 Kg/cm²)
- Vibrator Air Requirement: 2.8 SCFM @ 20 PSI
- 316 Stainless Steel Filter Media
- Flow Rates to 60 GPM (227 L/min)
- Multiple Tube Systems for Higher Flow Rates are Available
- TFE O-Ring Seals
- Unit Weight 29 Lbs. (13.2 Kg)

General Applications

The NMW 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.
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 NMW 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 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 NMW Vibrating Filter eliminates all of these problems to deliver consistent filtration.

NMW’s Unique Design

The NMW Vibrating Filter is equipped with a Multi-Cluster element, which consists of three 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 NMW Vibrating Filter means large solids are constantly in suspension, while fluid with the correct size particles is consistently flowing.
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.

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 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.

U.S. PATENT NO. 5,455,738
Standard Construction for the NMW Vibrating Filter

Specification and Application Data

**Operating Limits**
- Recommended maximum flow: 60 GPM (227 L/min)
- Maximum pressure: 300 PSI (21 kg/cm²)
- Maximum temperature: 325°F (163°C)

**Air Requirements**
- 2.8 SCFM @ 20 psi

**Air Connections**
- ¼" NPT

**Auxiliary Connections**
- ¼" FNPT blowdown
- ¼" FNPT drain/purge

**Materials of Construction**
- **Filter:** 316 stainless steel (low carbon)
- **Gaskets:** TFE Encapsulated Viton

**Shipping Weight**
- 29 pounds (13.2 kg) approximate

**Inlet and Outlet Connections**
- **Standard:** 1-½" FNPT
- **Optional:** 1" to 1-½" socket weld, ¼" to 2" sanitary

**Options**
- 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

**How To Order**
- TCF - 0198 - XXX
  - 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.

Growing Strong Since 1907
Box 678, Nowata, OK 74048
918-273-2204
800-259-2204
Fax: 918-273-2101
www.nowata.com
Email: sales@nowata.com