



# NEW: Ultipor® SRT Filter Elements

## The Next Generation in Fluid System Protection

Featuring Stress-Resistant Media Technology

### Innovative Media Performance

Pall's new series of hydraulic and lube filter elements feature Ultipor® SRT (stress-resistant technology) media for unsurpassed performance and value. Ultipor SRT elements provide:

- Low element pressure drop for small envelope size and long life
- Optimum performance at all stages of filter life for cleaner fluid
- Optimum performance under cyclic flow and pressure conditions for cleaner fluid

### Ultipor SRT Filter Technology

Designing filter elements has traditionally been a question of balance. Make a filter finer and more efficient and you have to sacrifice clean pressure drop and/or service life. With the Ultipor SRT filter design we've improved the filter's ability to maintain fluid cleanliness, while at the same time reducing clean pressure drop and adding more filter area to capture dirt. The result: better, more consistent system protection combined with long filter service life in an environmentally friendly package (see Table 2 on the next page).

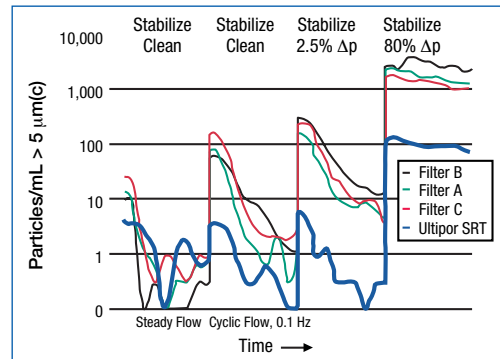
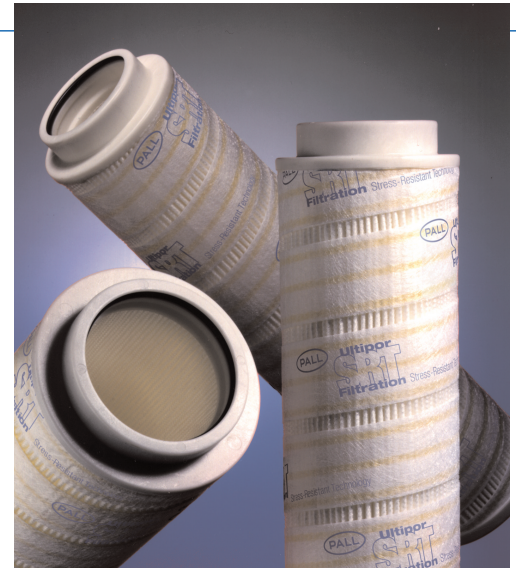


Figure 1 Stress-Resistance Test - Downstream Particle Counts > 5 µm(c)



Ultipor SRT Filter Elements

### Measuring Filter Performance - the Stress-Resistance Test

The data from an ISO Multi-pass test is often used as the only performance based factor in the process of selecting filters. This test has the potential to exaggerate a filter's capabilities and is not indicative of filter performance under actual operating conditions.

Conditions such as varying flow, cold starts, shock and vibration can potentially reduce the effectiveness of a filter in an operating system. This may cause the filter to release previously held contaminant and, consequently, make it less effective at removing the critically sized particles.

The Stress-Resistance Test examines the effects of cyclic flow conditions and contaminant loading on the capture and retention characteristics of the filter (Figure 1). The result is an improved filter performance reporting method that simply tells the user via ISO Codes (see Table 1) the level of fluid cleanliness that can be maintained throughout the filter's service life. For more details see publication PM&E SRT-tech.

Table 1 Filter Performance Ratings

Ultipor SRT Filter Grade	ISO Code Rating per Stress-Resistance Test (80% ΔP)*
MP	15/10/04
MN	17/13/05
MS	19/16/06

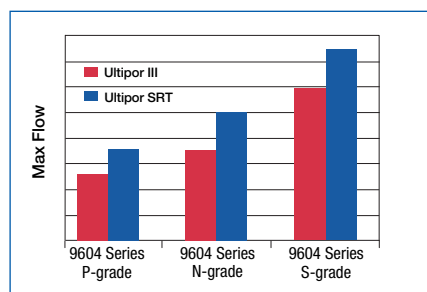
\* based on 4 bar (60 psid) terminal pressure drop

**Table 2 The Ultipor SRT Filter Advantage**

Feature	Advantage	Benefit
Tapered pore media	- Dirt captured throughout the media depth	- Long filter service life
Tight fiber matrix with small fiber size	- High particle removal efficiency (Betas) - Consistent performance	- Cleaner fluid - Increased system protection
Thin media pack	- More filter area per element	- Long filter life - Lower filtration costs
Ultipor SRT media construction	- Increased stability under cyclic or dirt loading conditions	- Cleaner fluid under cyclic conditions - Highest performance throughout the filter's service life
Low pressure drop	- Smaller package size - Less cold start bypass - Longer filter life - Less stress on the filter element	- Lower package cost and less space requirement - Increased system protection - Lower element change-out cost - Consistent filter performance throughout its life

## Ultipor SRT Filter Performance

### Increased Maximum Flow

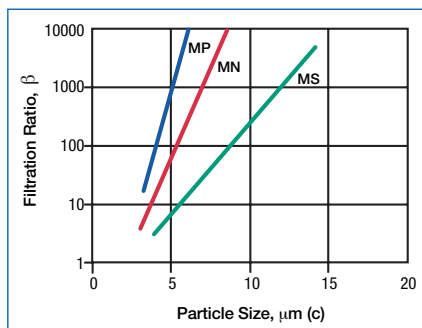


**Figure 2 Maximum Flow Improvement**

## Specifications

### Filter Ratings

- Stress-Resistance Test (80% Δp) ISO Code rating (see Table 1)
- Multi-pass filter ratings (per ISO 16889), see Figure 3



**Figure 3 Filtration Ratios per ISO 16889**

### Element Collapse Pressure Rating (ISO 2941)

- 10 bar (150 psid)

### Fluid Compatibility (ISO 2943)

Compatible with petroleum oils, water glycols, water-oil emulsions, and high water containing fluids. Fluorocarbon seals are available for industrial phosphate esters, diesters, and specified synthetics.

### Flow vs. Pressure Drop (ISO 3968)

See bulletin PM&E USRT PD

### Filter Element Hardware

Corrosion protected end caps and core

### Flow Fatigue (ISO 3724)

Contact factory; element structure incorporates upstream and downstream medium support to achieve maximum fatigue cycle life.

### Fabrication Integrity (ISO 2942)

Fabrication integrity is validated and assured during the manufacturing process by numerous evaluations and inspections including Bubble Point testing.

### Temperature Range

- Nitrile seals: -43°C (-45°F) to +107°C (+225°F)
- Fluorocarbon seals: -29°C (-20°F) to +120°C (+250°F)

**Note:** maximum 60°C (140°F) in water based fluids

### Quality Control

All elements are manufactured by Pall to exacting procedures and strict quality controls. Elements are checked against rigorous ongoing validation test protocols within Pall Corporation. Pall is accredited to ISO 9001 and QS 9000.



**Pall Corporation**

### Machinery and Equipment

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