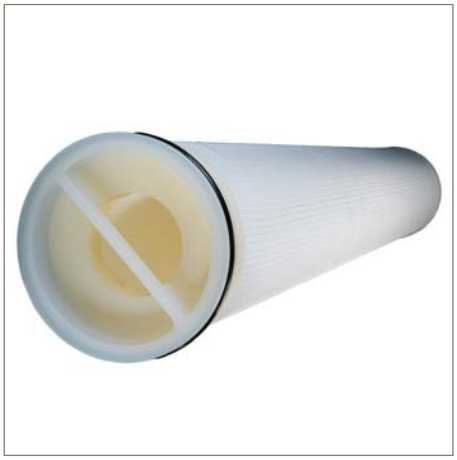
# ParMax™ Filter Vessel

## For High-Flow Capacity



ParMax™ vessels are designed to accept ParMax™ filter cartridges that handle up to 500 gpm (1892 lpm) per 60" length. They provide significant size and capital cost reduction when compared with vessels containing conventional size filter cartridges. The horizontal design and coreless cartridge configuration make cartridge change fast and easy.

ParMax filter cartridges feature inside/out flow direction and are available in either 40" or 60" lengths. Actual flow rate is dependent upon fluid viscosity, micron rating, contaminant, media type and inlet velocity. Consult ParMax cartridge flow charts for each application.

## Contact Information

Parker-Hannifin Corporation
**Process Advanced Filtration Division**
2340 Eastman Avenue
Oxnard, California, USA 93030

**toll free +1 877 784 2234**
**phone +1 805 604 3400**
**fax +1 805 604 3401**
**PAFsales@parker.com**

www.parker.com/processfiltration

## Benefits

- Large diameter cartridge yields high flow rate per cartridge resulting in fewer cartridges and smaller, lower cost vessels.
- Horizontal design provides better access to cartridges, eliminating the need for an elevated platform. Vertical orientation is also available.
- Inside-out flow direction captures contaminates on the interior of the filter cartridge, reducing cleanup effort and overall downtime.
- Designed and manufactured in accordance with the ASME Boiler and Pressure Vessel Code to ensure the highest quality and integrity.
- Available in carbon steel, 304L and 316L stainless steel. Other materials are available upon request. Carbon steel models include stainless steel cartridge support baskets.
- Available in 150 PSI and 300 PSI pressure ratings. Custom pressure ratings available upon request.
- O-ring cover seal for quick and positive vessel closure sealing.
- Closure locating guides for quick and accurate cover alignment.
- Cartridges have external O-ring for positive seal and are mechanically constrained under operating conditions

## Applications

- Potable Water
- Process Water
- Edible Oils
- Pre-RO Membrane Protection
- Solvents
- RO Membrane Cleaning
- Lubricants
- Coolants
- Cutting Oils
- Process Chemicals

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### ParMax Filter Cartridges

- One six-inch diameter cartridge can handle up to 500gpm flow (60” length)
- The inside-to-outside flow allows for a high contaminant holding capacity
- High-flow and long filter life
- Ideal choice for a wide variety of critical process applications

### Standard Design

The best of pleated and large diameter technologies are combined in Parker’s ParMax™ high-flow filter cartridges. The unique layered construction provides excellent retention across a wide range of flux rates. ParMax cartridges are available with polypropylene and microfiberglass media in absolute (99.98%) ratings from 1 to 90 microns.

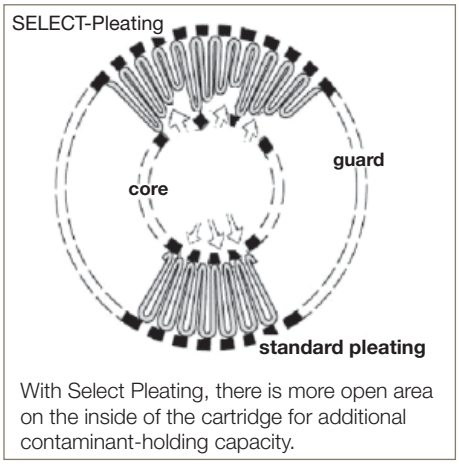
### SELECT Design

The unique layered construction and staged pleating of the ParMax™ Select cartridges provide improved dirt-holding capacity and retention across a wide range of flux rates. ParMax Select cartridges are available with polypropylene pleated depth media and microfiberglass media in absolute (99.98%) ratings from 1 to 90 microns.

### Typical Aqueous Flow Rates

| Optimal Flow Rate | Surface Area (sq. ft.) | Flux Rate (GPM \| sq. ft.) |
|---|---|---|
| **20" Cartridge** | **120 GPM** | |
| Standard | 25 | 4.80 |
| Select | 32 | 3.75 |
| **40" Cartridge** | **240 GPM** | |
| Standard | 50 | 4.80 |
| Select | 62 | 3.87 |
| **60" Cartridge** | **360 GPM** | |
| Standard | 75 | 4.80 |
| Select | 94 | 3.83 |
| **Recommended Max. Flow Rate** | **Surface Area (sq. ft.)** | **Flux Rate (GPM \| sq. ft.)** |
| **20" Cartridge** | **175 GPM** | |
| Standard | 25 | 7.00 |
| Select | 32 | 5.47 |
| **40" Cartridge** | **350 GPM** | |
| Standard | 50 | 7.00 |
| Select | 62 | 5.65 |
| **60" Cartridge** | **500 GPM** | |
| Standard | 75 | 6.67 |
| Select | 94 | 5.32 |

Using higher flow rates than optimal can result in reduced cartridge efficiency and life as well as system filtrate velocities exceeding 10 FPS.




With Select Pleating, there is more open area on the inside of the cartridge for additional contaminant-holding capacity.

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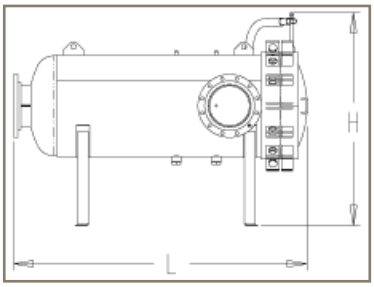


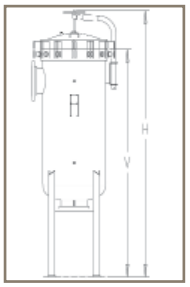


**Design Specifications** (All dimensions are inches)

| Model *Material of Construction (C, G or S) | Cartridge Qty. in Vessel | H Overall Height (Horizontal) | L Overall Length (Horizontal) | Vessel Nominal Diameter | Optimal Inlet/Outlet Size | Max. Flow GPM | Empty Vessel Weight (lbs.) |
|---|---|---|---|---|---|---|---|
| **40 INCH CARTRIDGE(S) - HORIZONTAL DESIGN** | | | | | | | |
| PX * U0140H03F | 1 | 43.0 | 60.2 | 8.0 | 3 | 350 | 250 |
| PX * U0340H06F | 3 | 58.4 | 69.8 | 16.0 | 6 | 1,050 | 694 |
| PX * U0540H08F | 5 | 59.0 | 77.0 | 20.0 | 8 | 1,750 | 935 |
| PX * U0740H10F | 7 | 60.0 | 79.7 | 22.0 | 10 | 2,450 | 1106 |
| PX * U0840H10F | 8 | 61.0 | 79.9 | 24.0 | 10 | 2,800 | 1248 |
| PX * U1240H12F | 12 | 64.0 | 88.4 | 30.0 | 12 | 4,200 | 1672 |
| PX * U1540H14F | 15 | 65.0 | 90.8 | 32.0 | 14 | 5,250 | 1938 |
| PX * U1940H16F | 19 | 67.3 | 94.5 | 36.0 | 16 | 6,650 | 2593 |
| **60 INCH CARTRIDGE(S) - HORIZONTAL DESIGN** | | | | | | | |
| PX * U0160H04F | 1 | 43.0 | 81.3 | 8.0 | 4 | 500 | 325 |
| PX * U0360H08F | 3 | 58.4 | 91.8 | 16.0 | 8 | 1,500 | 756 |
| PX * U0560H10F | 5 | 59.0 | 99.0 | 20.0 | 10 | 2,500 | 1070 |
| PX * U0760H10F | 7 | 60.0 | 99.7 | 22.0 | 10 | 3,500 | 1181 |
| PX * U0860H12F | 8 | 61.0 | 101.9 | 24.0 | 12 | 4,000 | 1389 |
| PX * U1260H14F | 12 | 64.0 | 109.7 | 30.0 | 14 | 6,000 | 1834 |
| PX * U1560H16F | 15 | 65.0 | 112.9 | 32.0 | 16 | 7,500 | 2113 |
| PX * U1960H18F | 19 | 67.3 | 116.5 | 36.0 | 18 | 9,500 | 2828 |

| Model *Material of Construction (C, G or S) | Cartridge Qty. in Vessel | H Overall Height (Vertical) | V Access Height (Vertical) | Vessel Nominal Diameter | Optimal Inlet/Outlet Size | Max. Flow GPM | Empty Vessel Weight (lbs.) |
|---|---|---|---|---|---|---|---|
| **40 INCH CARTRIDGE(S) - VERTICAL DESIGN** | | | | | | | |
| PX * U0140V03F | 1 | 69.4 | 65.5 | 8.0 | 3" | 350 | 250 |
| PX * U0340V06F | 3 | 94.3 | 81.9 | 16.0 | 6" | 1,050 | 694 |
| PX * U0540V08F | 5 | 106.3 | 90.0 | 20.0 | 8" | 1,750 | 935 |
| PX * U0740V10F | 7 | 115.2 | 98.8 | 22.0 | 10" | 2,450 | 1106 |
| PX * U0840V10F | 8 | 115.5 | 98.8 | 24.0 | 10" | 2,800 | 1248 |
| PX * U1240V12F | 12 | 129.0 | 110.3 | 30.0 | 12" | 4,200 | 1672 |
| PX * U1540V14F | 15 | 135.0 | 115.8 | 32.0 | 14" | 5,250 | 1938 |
| PX * U1940V16F | 19 | 143.6 | 123.4 | 36.0 | 16" | 6,650 | 2593 |

**Actual flow rate is dependent on fluid viscosity, micron rating, contaminant, media type and inlet velocity. Consult media flow charts for each application.** Shipping weights and dimensions are for 150 PSIG nominal design only. 40" & 60" refer to nominal cartridge length.

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### Maximum Operating Conditions

| Material of Construction | Max. Allowable Pressure (psi @ MAT °F) | Max. Allowable Temp. (MAT) (°F @ MAP psi) |
|---|---|---|
| Carbon Steel | 150 psi (10.3 bar) | 250° (121° C) |
| Carbon Steel | 300 psi (20.7 bar) | 250° (121° C) |
| 304L Stainless Steel | 150 psi (10.3 bar) | 250° (121° C) |
| 304L Stainless Steel | 300 psi (20.7 bar) | 250° (121° C) |
| 316L Stainless Steel | 150 psi (10.3 bar) | 250° (121° C) |
| 316L Stainless Steel | 300 psi (20.7 bar) | 250° (121° C) |

### Ordering Information

**PX** □ □ □ □ □ □ □ □ □

| Code | |
|---|---|
| PX | ParMax Vessel |

| Material | |
|---|---|
| C | Carbon Steel |
| G | 304L Stainless Steel |
| S | 316L Stainless Steel |

| Design | |
|---|---|
| U | ASME Code |

| Cartridge Qty. | |
|---|---|
| 01 | 1 |
| 03 | 3 |
| 05 | 5 |
| 07 | 7 |
| 08 | 8 |
| 12 | 12 |
| 15 | 15 |
| 19 | 19 |

| Cartridge Length (in.) | |
|---|---|
| 40 | 40" |
| 60 | 60" |

| Vessel Orientation | |
|---|---|
| H | Horizontal |
| V | Vertical* |

*60" vertical not recommended.

| Optimal Inlet/Outlet Size (in.) | |
|---|---|
| 03 | 3" |
| 04 | 4" |
| 06 | 6" |
| 08 | 8" |
| 10 | 10" |
| 12 | 12" |
| 14 | 14" |
| 16 | 16" |
| 18 | 18" |

| Inlet/Outlet Connection Type | |
|---|---|
| F | ANSI 150 lb. flange |
| H | ANSI 300 lb. flange |

F=150 PSI vessel design
H=300 PSI vessel design

| Finish | |
|---|---|
| C | Painted |
| B | Glass Bead Blast |
| P | Passivated |

C is valid for carbon steel design only.

B & P are valid for stainless steel design only.




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