

**Chemical & Industrial Strainers:
Thermoplastic-Lined Options**





CHEMICAL RESISTANT STRAINERS

Thermoplastic-Lined Strainer Options

■ **Polyvinyl Chloride** Class 12454B is very frequently specified material for many manufacturing applications. PVC has excellent resistance to acids, alkalies, and salt solutions among others. Also, it has the highest long-term hydrostatic strength at 73 deg F than any other major thermoplastic. It is not a good choice for polar solvents such as keytones, some chlorinated hydrocarbons and aromatics. Max temperature for PVC is 140 deg F.

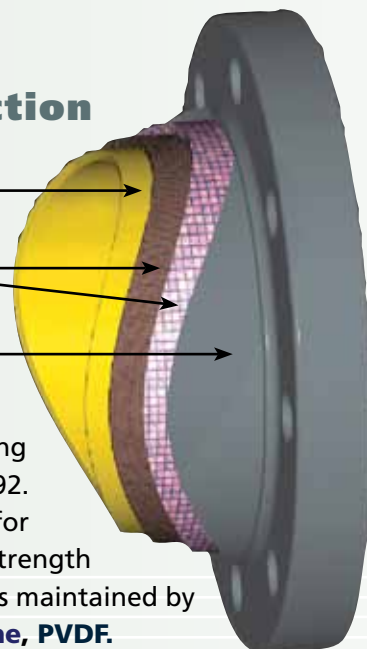
■ **Chlorinated Polyvinyl Chloride** Class 23447-B has similar properties to PVC at 73 deg F and its chemical resistance is generally the same. However, CPVC has a Temperature Correction Factor that is much more favorable for high temperature applications.

■ **Polypropylene** shall be extruded from Group 1, Class 2, Alpha nucleated homopolymer material in accordance with ASTM D-4101. It is chemically resistant to many compounds and maintains its pressure ratings at higher temperatures. This light weight, high strength material is resistant to organic solvents and most acids and alkalies, but should not be used with oxidizing acids, chlorinated hydrocarbons and aromatics.

■ **PVDF** shall be extruded from virgin, pure, unpigmented homopolymer Kynar 740 resin and shall meet or exceed requirements of Table 1 of ASTM D-3222. PVDF is a strong, tough and abrasion-resistant material. This fluorocarbon material resists distortion and retains most of its strength to 280 deg F. Of all thermoplastics, PVDF provides the greatest combination of strength, chemical resistance and working temperatures.

Fluidtrol Strainer Construction

- 1 Thermoplastic Pipe Liner
- 2 FRP Reinforcement Stratum
- 3 Resin Gel Coat



Fluidtrol Process Technologies, Inc. has been building basket strainers for the industrial applications since 1992. Our design utilizes a composite laminate construction for strainer bodies and components to provide structural strength and optimize chemical resistance. Chemical resistance is maintained by providing wetted surfaces of **PVC, CPVC, Polypropylene, PVDF.**

STRAINER SPECIFICATION TABLES

Getting as much information available during the initial stages of a strainer design is critical. We do understand how design criteria changes as projects develop and we are very reactive to these variations. The information in the tables to the right will most likely not be completely available at the onset of a project, but should be filled out as well as possible for optimal strainer design.

Composition		
Operating Temperature		F
Operating Pressure		PSI
Viscosity		Centipoise
Specific Gravity		SG
Minimum Size to Filter		Mesh, Micron, Inch or MM
Allowable Pressure Drop		PSI - Clean Basket
Flow Rate		GPM

STRAINER CHARACTERISTICS

Type of Strainer		Liner Material	
Size		Drain Size/Type	
Designed Flow Rate		End Connections	
Design Pressure		Vent Size/Type	
Maximum Temperature		Pressure Taps	
Maximum Pressure		Model Number	
Housing Material		Date of Manufacture	
Gasket Material		Serial Number	

MAXIMUM PRESSURE VS TEMPERATURE FOR VARIOUS MATERIALS

Construction Material	Temperature °F								
	0	32	73	100	140	180	200	260	300
■ PVC/FRP Polyvinyl Chloride	150	150	150	125	100	N/R	N/R	N/R	N/R
■ CPVC/FRP Chlorinated Polyvinyl Chloride	150	150	150	150	150	150	100	N/R	N/R
■ PP/FRP Polypropylene	150	150	150	150	150	150	100	N/R	N/R
■ PVDF/FRP	150	150	150	150	150	150	150	150	N/R
■ HALAR/FRP	150	150	150	150	150	150	150	150	150

PREDICTING STRAINER PRESSURE DROPS

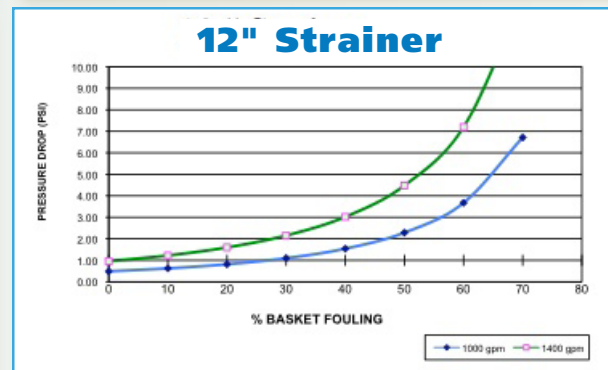
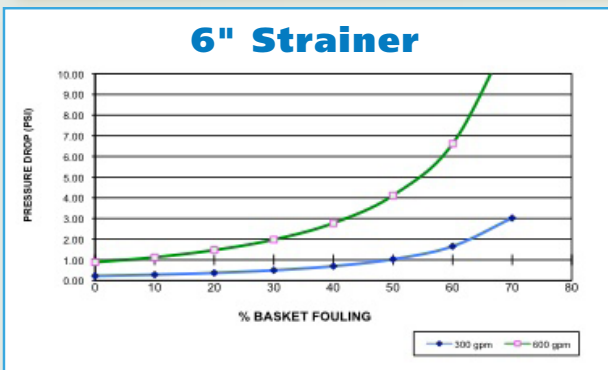
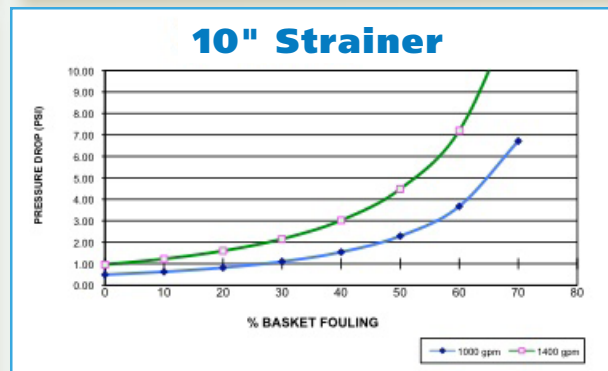
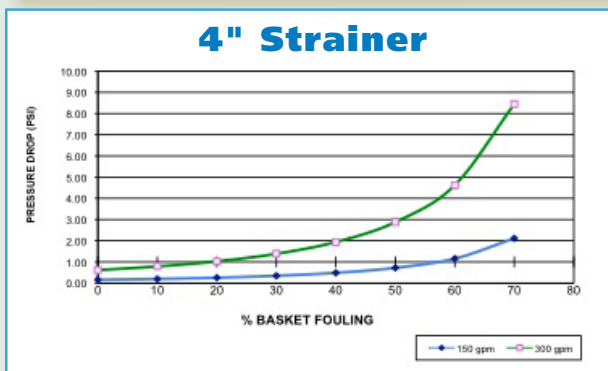
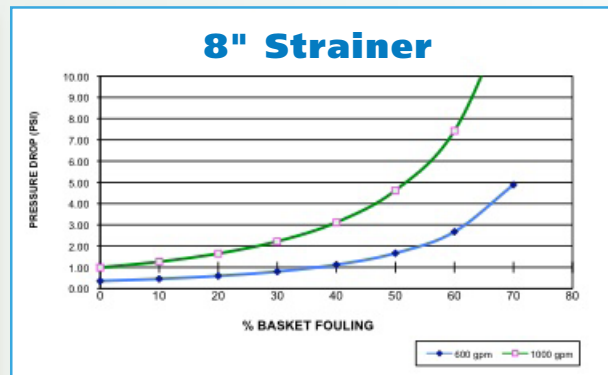
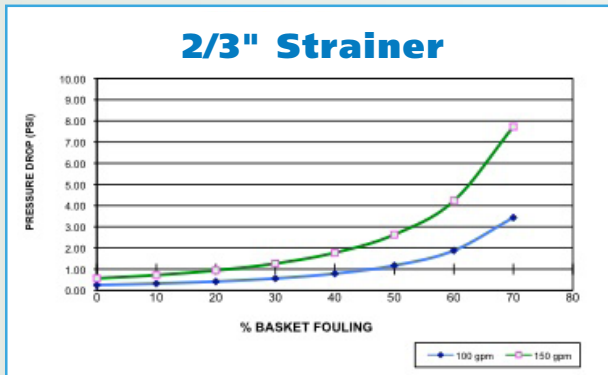
Fluidtrol strainers are sized for standard water flow rates equal to 5 – 8. FPS velocity in their respective line sizes equipped with standard perforated baskets. All systems are not standard and various filtration levels are required. Different flow rates and fluid characteristics exist that dramatically impact strainer performance.

The **Fluidtrol** design staff is equipped to quickly and accurately take these variables and translate them to the right unit for the job. Do not hesitate to utilize this resource on your next project.



This picture shows an inline configuration duplex. Custom configurations are available and units are sold with or without isolation valves

Strainer Size = Inlet Pipe Size



40% Open Area Perforation Pattern - Standard 1/8" or 1/4"