

Fluidry[®] Moisture Removal System

Product Catalog

A Fluidry[®] moisture removal system helps maintain low moisture content in hydrocarbons, silicone oils and transformer oil (insulation oil). This high-capacity molecular sieve-based system is also designed for effective moisture removal from refrigerants and lubricants.

Dynalene Inc
5250 West Coplay Road Whitehall, Pennsylvania 18052
Phone: 610.262.9686
Fax: 610.262.7437
Email: info@dynalene.com
Website: www.dynalene.com

TABLE OF CONTENTS

Introduction	3
SX Series	4
Specification and Ordering information.....	4
Drawing.....	5
Hydraulic properties.....	6
TX Series	12
Specification and Ordering information.....	12
Drawing.....	13
Hydraulic properties.....	14
HX Series	17
Specification and Ordering information.....	17
Hydraulic properties.....	19

Fluidry® Introduction

Description

The Fluidry® product line consists of moisture removal (or desiccation) systems which helps in maintaining low moisture content in hydrocarbons, silicone oils and transformer oil (insulation oil). These high-capacity molecular sieve-based systems are also designed for effective moisture removal from refrigerants and lubricants.



Maintaining low moisture content in low- and high-temperature heat transfer fluids is crucial to attaining or maintaining designed system efficiency. Moisture, which can enter into a fluid system due to improper seals, improper handling, system leaks, or malfunctioning driers, can cause system failures. Moisture in hydrocarbons operated below 0°C can form ice crystals that may clog valves and form a coating on heat exchanger surfaces, affecting the operational efficiency of the refrigeration system. In high-temperature applications, any moisture could turn to steam, which may increase internal pressure resulting in an eruption. Additionally, moisture in hydrocarbon- and silicone-based heat transfer fluids causes formation of acids, resulting in metal corrosion and chemical damage to gasket materials.

Features

- Our product line caters to a wide variety of fluid chemistries, flow rates and pressure rates.
- The products are designed for maximum moisture removal.
- The inlet and outlet connections can be customized to cater to the customer's requirements.
- Some products contain quick disconnect with automatic shut-off for easy handling and to avoid fluid spills.
- The desiccation system can be custom-built to fit your specifications, which includes choice of pipe fitting, material of construction, gasket material, pressure rating, flow rate, and water removal capacity.
- The desiccants are designed for maximum moisture adsorption capacity at lower temperatures.

Product line

Fluidry® includes, SX, TX, HX and M series desiccation products. The Fluidry® products are available for a wide range of fluid flow rates. The SX series desiccation system can be used for bench top or low flow rate desiccation applications. The TX and HX series desiccation systems are designed to handle higher flow rates. The HX series desiccation system is equipped with quick disconnect with automatic shut-off for easy handling and to avoid fluid spills.

M series desiccant is an alkali alumino silicate based molecular sieve which is designed for maximum moisture adsorption capacity in hydrocarbon based applications.

Customization

Fluidry® desiccation system product offerings provide an effective moisture removal solution in the hydrocarbon and silicone based heat transfer fluids, which is easy to handle and economical. The moisture removal system can be custom designed and manufactured to your requirements. Contact us at [610.262.9686](tel:610.262.9686) or email at info@dynalene.com and discuss your application with our fluid experts today.

SX Series



SX Series

The SX series desiccation system is designed for low-flow rate moisture removal. The system can handle moisture removal from hydrocarbons, silicone oils, transformer oil, refrigerants, and lubricants.

Features

- Works effectively for low flow rate applications.
- Inlet and outlet available in NPT or flared connections.
- Uses replaceable desiccant bags for easy desiccant change-out.
- Equipped with a carbon steel stand, and the height of the system can be adjusted to desired level.
- The Desiccation system can be custom-built to fit your specifications, which includes choice of inlet and outlet connections, gasket material and pressure rating.

Specifications

Size	10 and 16 (see technical drawing for dimensions)
Flow rate	2 GPM
Water Capacity at @ 25°C	1 to 2 lbs per desiccant bag change-out
Material of construction	304 Stainless Steel and 316 Stainless Steel
Gasket material	Buna-N, Viton®, and Teflon® (Customization available)
Inlet/outlet type	NPT and flare (Customization available)
Pressure rating	100 PSI
Pipe connections	0.5 inch
Support stand	Carbon steel tripod leg assembly (Customization available)
Footprint of the system	6 x 6 inch

Ordering Information

Brand	Series	Size	Material of Construction
Fluidry®	SX	10	B

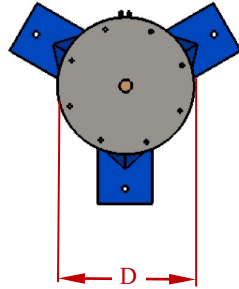
Size	Maximum Flow Rate (GPM)	Height of the cartridge (inch)
10	2	10
16	2	16

Code	Material of Construction
B	304 Stainless Steel
C	316 Stainless Steel

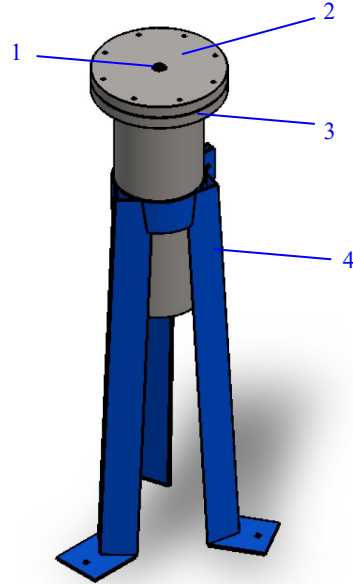
SX Series

Technical Drawing

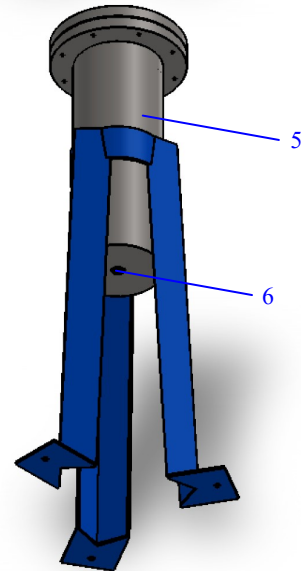
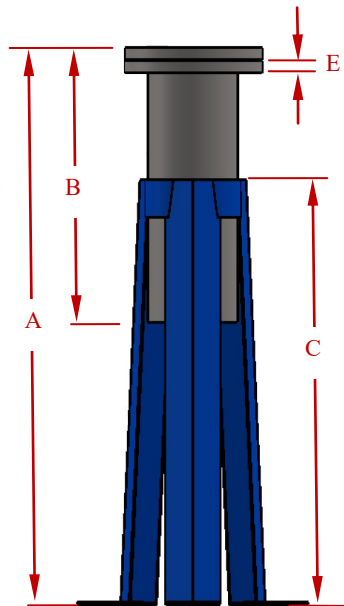
TOP VIEW



PROFILE VIEW



FRONT VIEW



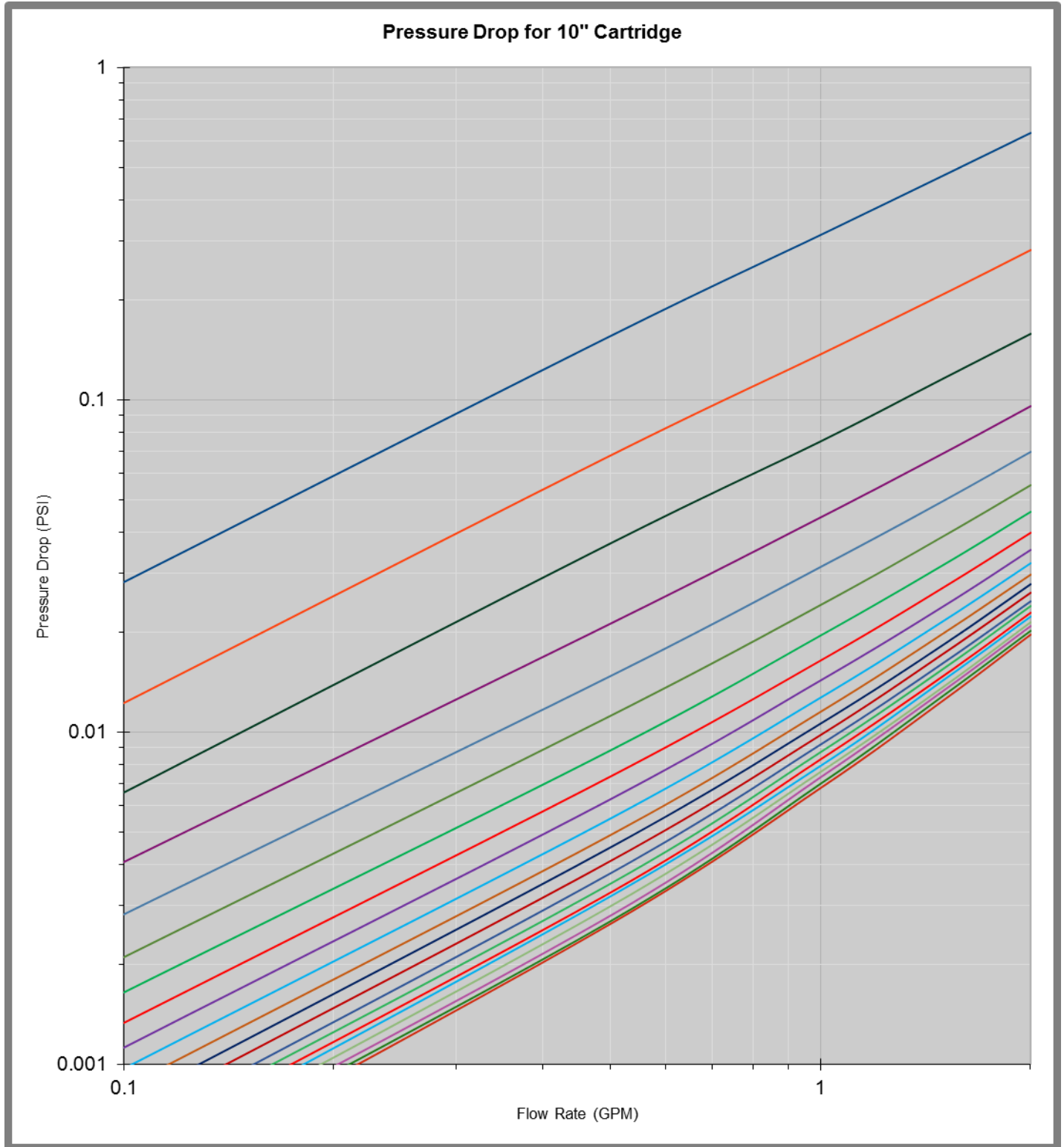
SX Series						
Size	A	B	C	D	E	Inlet / Outlet
10	Adjustable	11	17	5 1/2	1/2	1/2 FNPT
16	Adjustable	17	17	5 1/2	1/2	1/2 FNPT

Note: All dimensions in inches.

Item	Description
1	Inlet
2	Top flange
3	Bottom flange
4	Stand
5	Filter section
6	Outlet

Hydraulic Properties: Dynalene MV

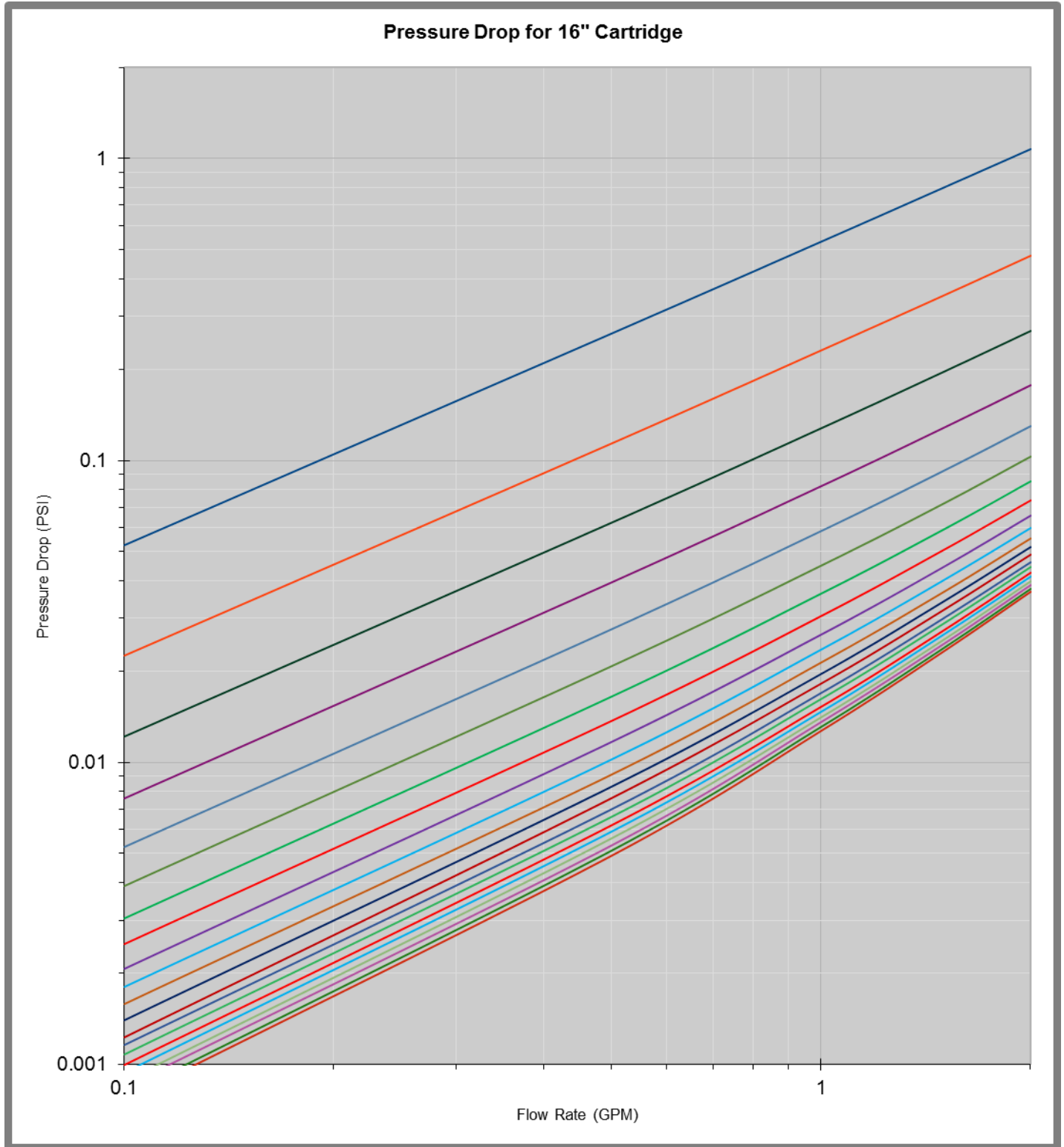
- -100°C — -90°C — -80°C — -70°C — -60°C — -50°C — -40°C — -30°C — -20°C — -10°C
— 0°C — 10°C — 20°C — 30°C — 40°C — 50°C — 60°C — 70°C — 80°C — 90°C — 100°C



SX Series

Hydraulic Properties: Dynalene MV

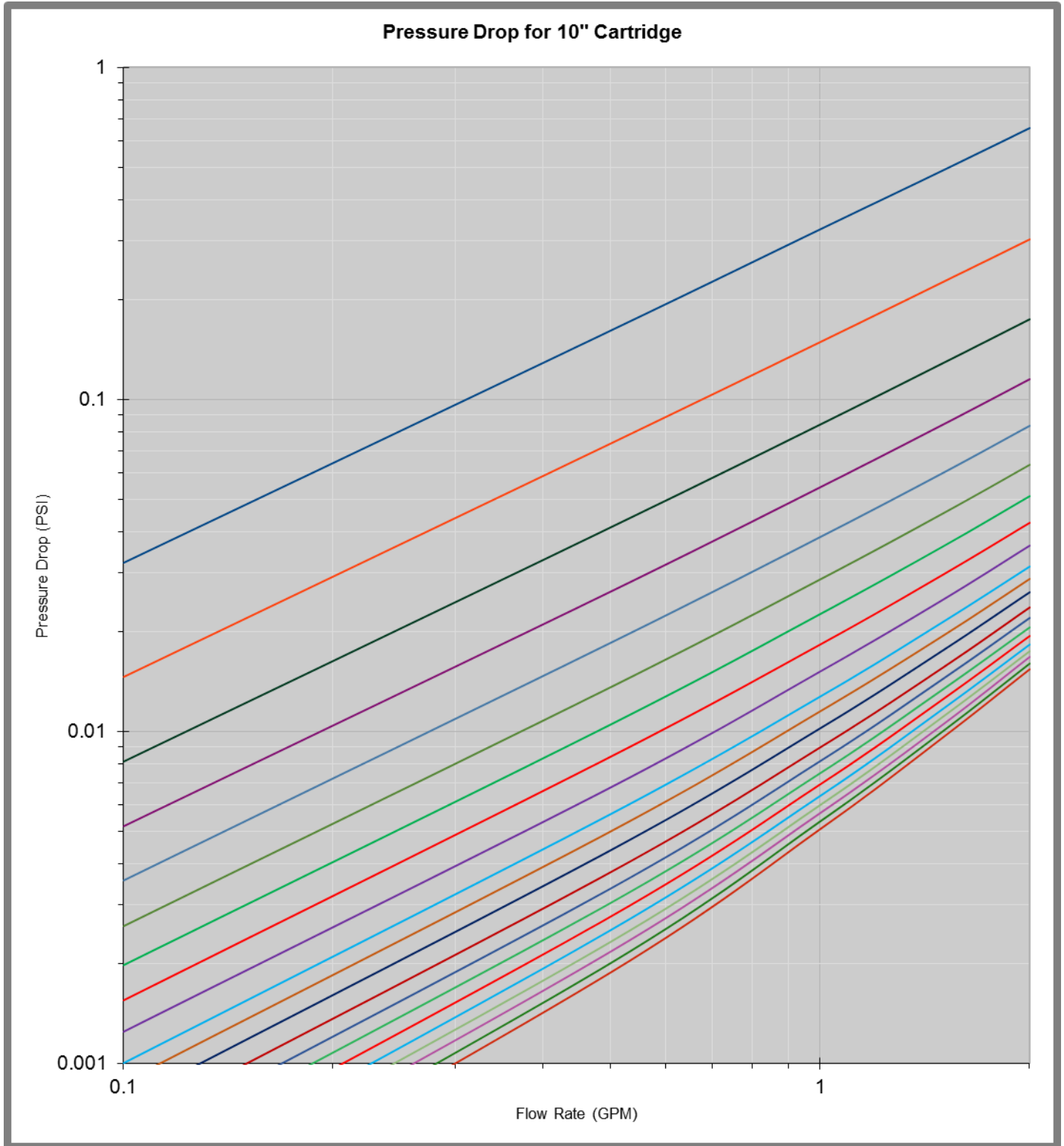
- 100°C -90°C -80°C -70°C -60°C -50°C -40°C -30°C -20°C -10°C
- 0°C 10°C 20°C 30°C 40°C 50°C 60°C 70°C 80°C 90°C 100°C



SX Series

Hydraulic Properties: HF-LO

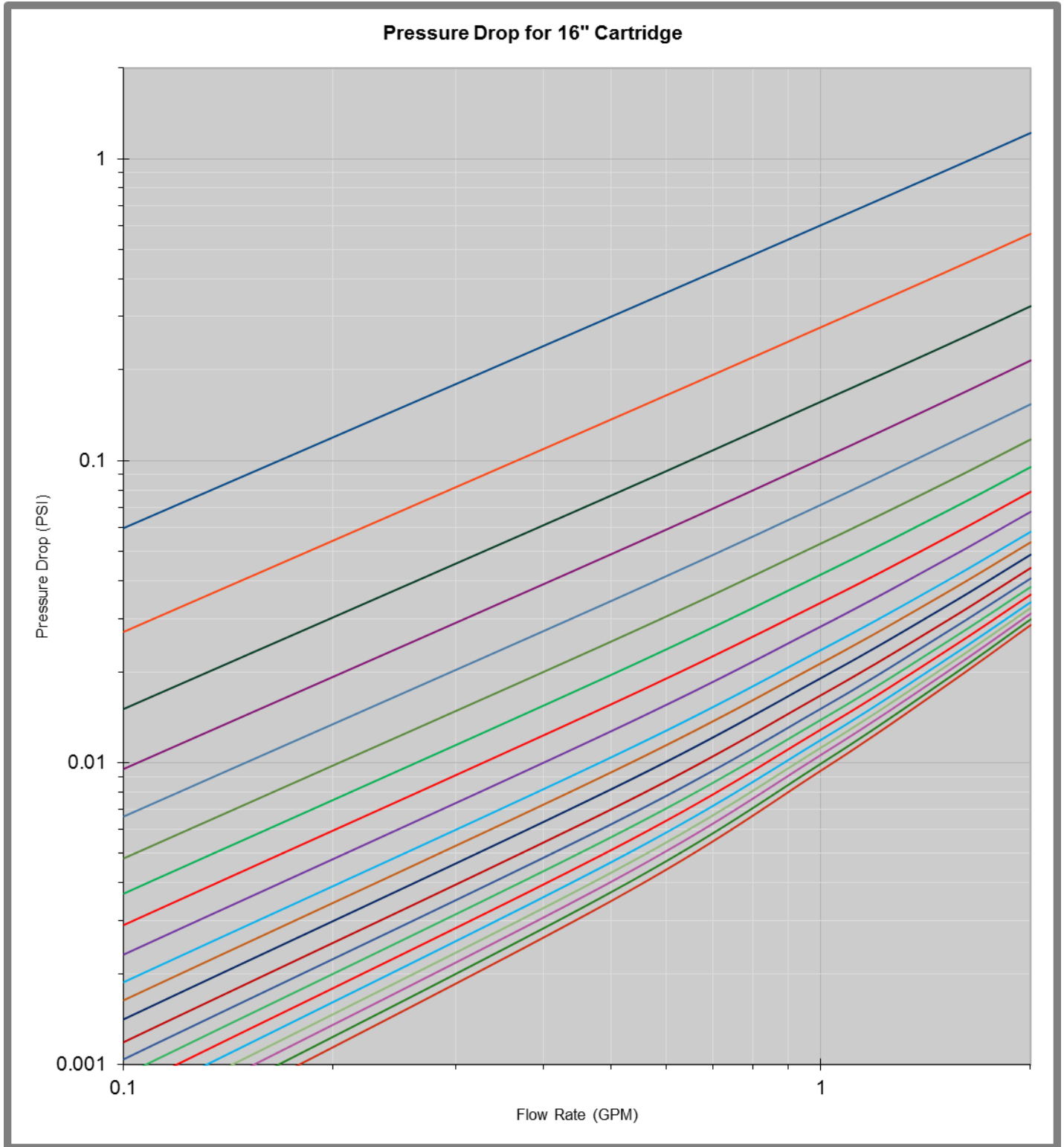
- 70°C -60°C -50°C -40°C -30°C -20°C -10°C 0°C 10°C 20°C
30°C 40°C 50°C 60°C 70°C 80°C 90°C 100°C 110°C 120°C 130°C



SX Series

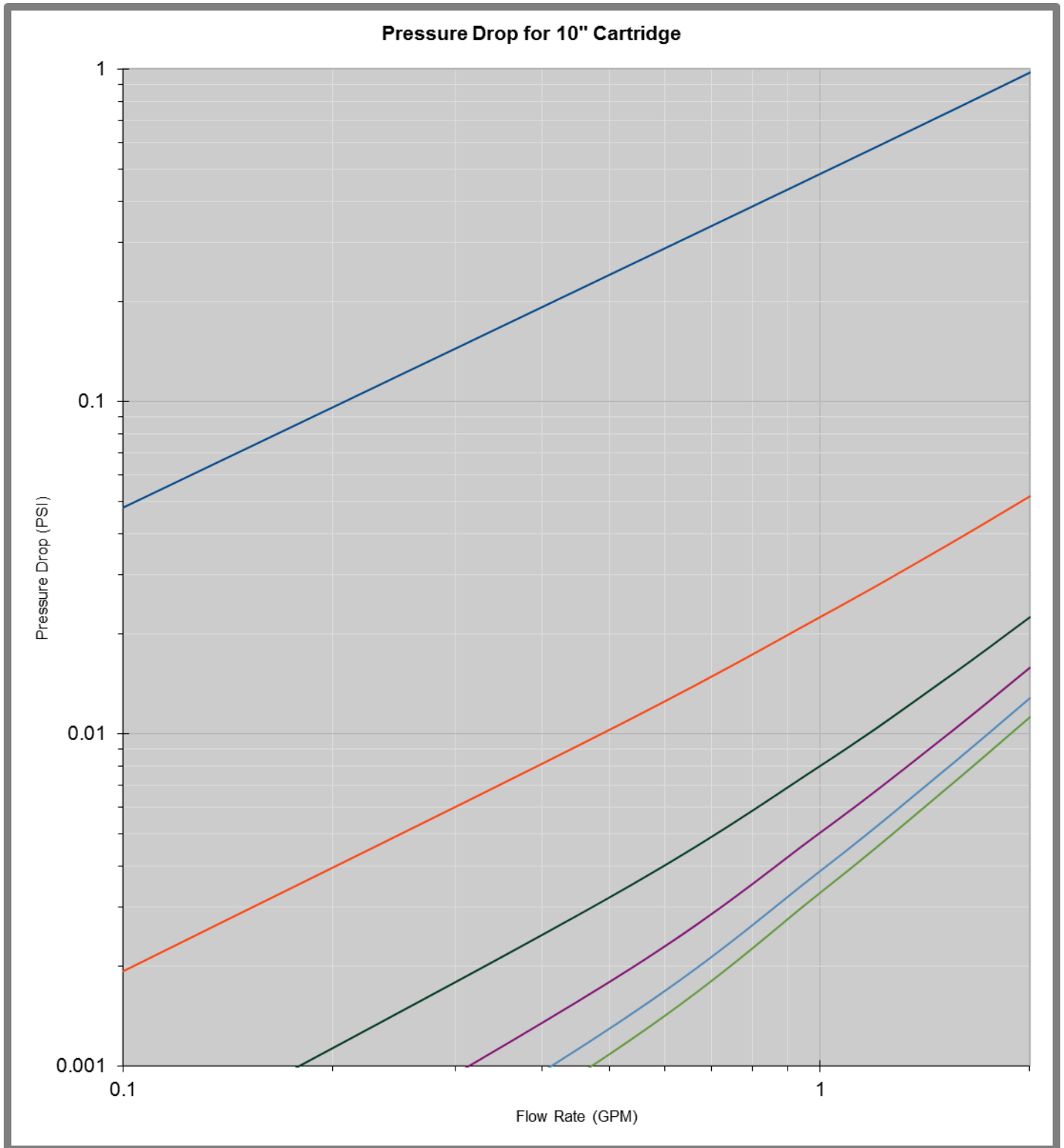
Hydraulic Properties: HF-LO

- 70°C -60°C -50°C -40°C -30°C -20°C -10°C 0°C 10°C 20°C
- 30°C 40°C 50°C 60°C 70°C 80°C 90°C 100°C 110°C 120°C 130°C



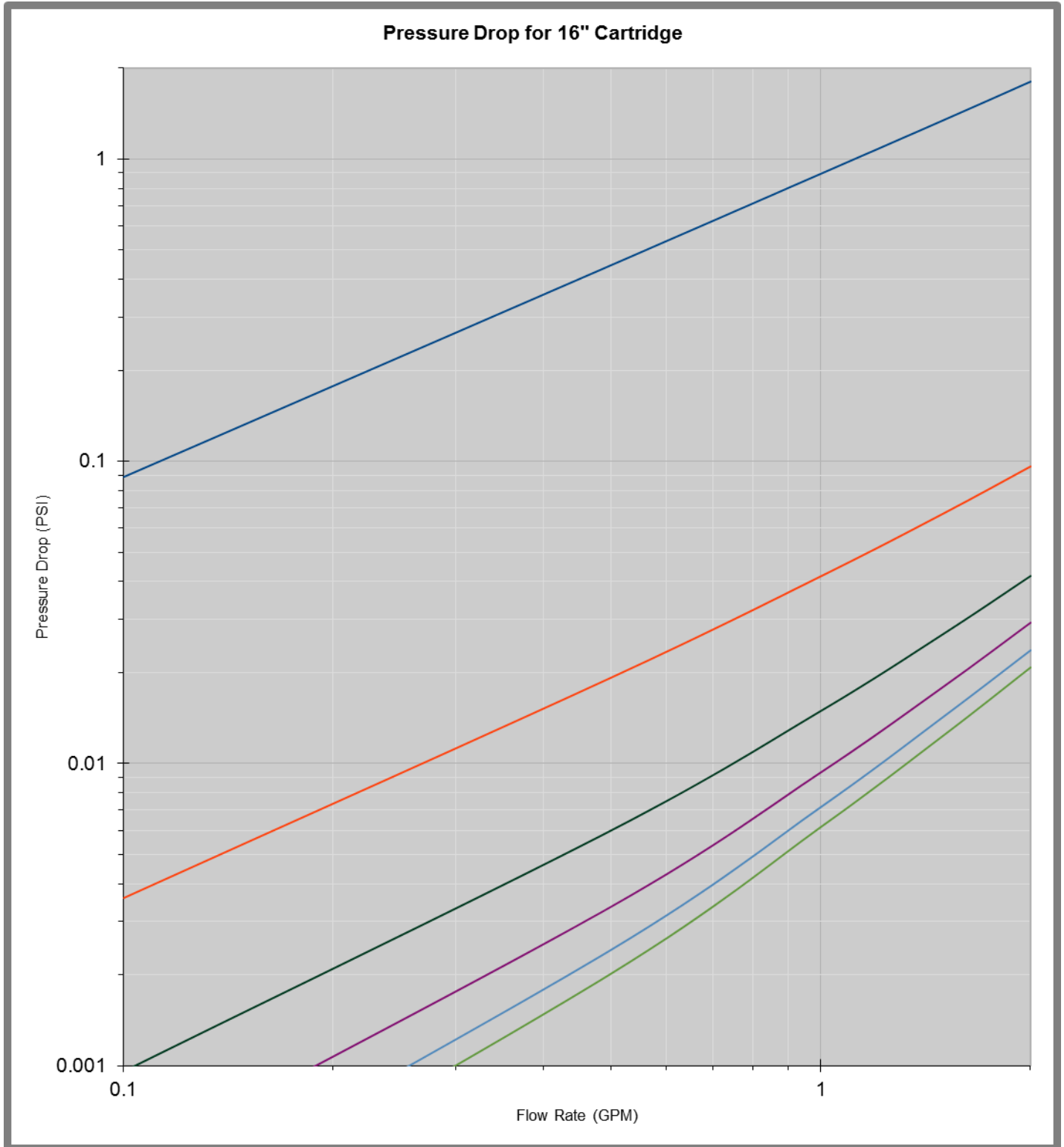
Hydraulic Properties: Syltherm XLT

-100°C -20°C 60°C 140°C 220°C 280°C



Hydraulic Properties: Syltherm XLT

-100°C -20°C 60°C 140°C 220°C 280°C



TX Series



TX Series

The TX series desiccation system is designed for moderate- to high-flow rate moisture removal. This system is equipped with internal filters that prevent desiccant particulates from entering the fluid stream. The system can handle moisture removal from hydrocarbons, silicone oils, transformer oil, refrigerants, and lubricants.

Features

- Works effectively for moderate to high flow applications.
- Inlet and outlet available in NPT or flange connections.
- Contains internal filters that prevent particulate contaminants from the desiccant entering the fluid stream.
- Includes drain port and ports that can be used to connect pressure gauges.
- Can be custom built to fit your specifications, including choice of inlet and outlet connections, gasket material, and pressure rating.

Specifications

Size	12X (see technical drawing for dimensions)
Flow rate	8 GPM
Water Capacity at @ 25°C	5 lbs per cartridge change-out
Material of construction	304 Stainless Steel and 316 Stainless Steel
Gasket material	Buna-N, Viton®, and Teflon® (Customization available)
Filter size	5, 10 or 25 micron
Inlet/outlet type	NPT and flange (Customization available)
Pressure rating	150 PSI (ASME code stamp available)
Pipe connections	2 or 3 inch
Support stand	Stainless steel tripod leg assembly (Customization available)
Footprint of the system	18 x 21 x 52 inch

Ordering Information

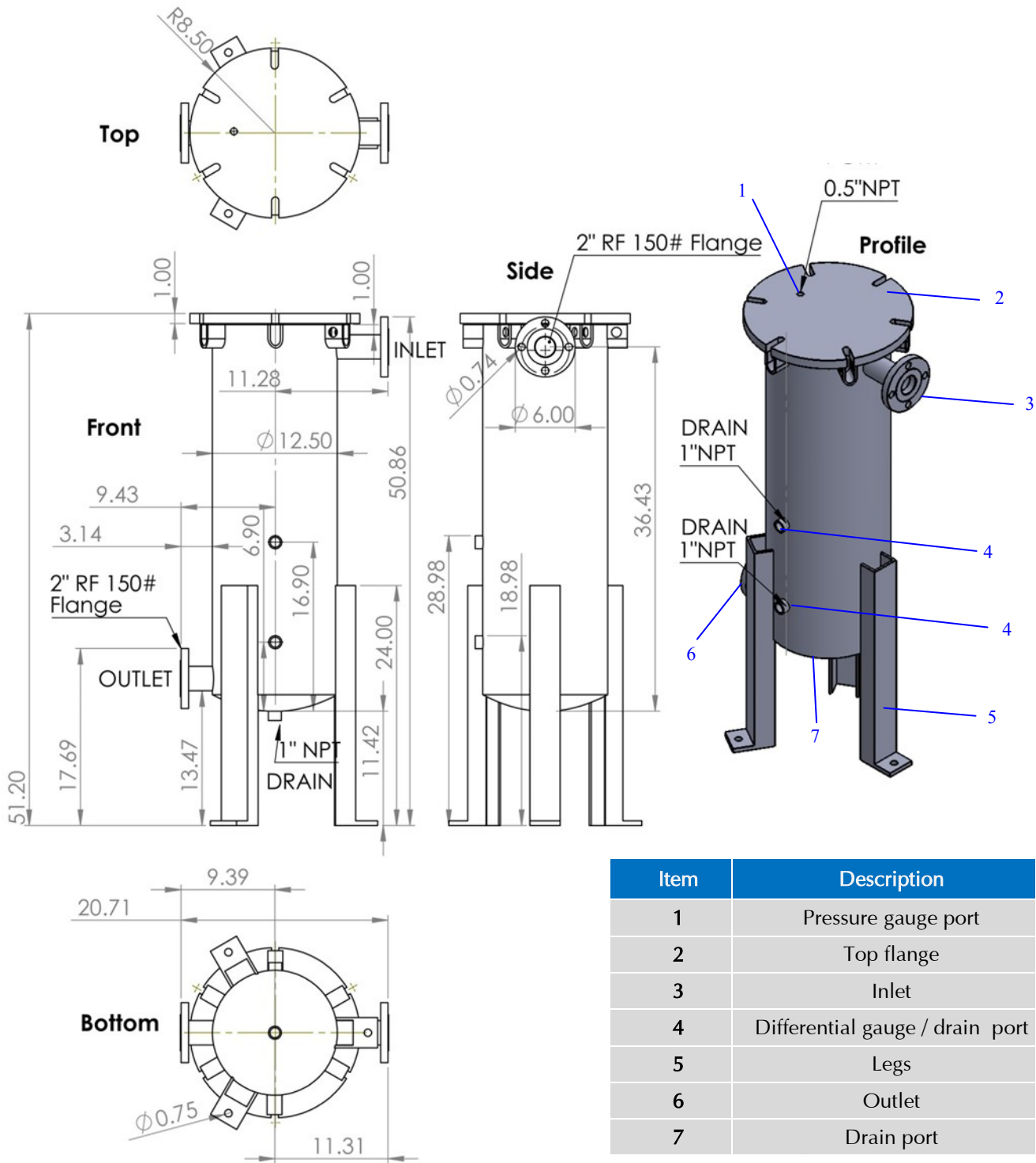
Brand	Series	Size	Material of Construction
Fluidry®	TX	12X	B

Size	Maximum Flow Rate (GPM)
12X	8

Code	Material of Construction
B	304 Stainless Steel
C	316 Stainless Steel

TX Series

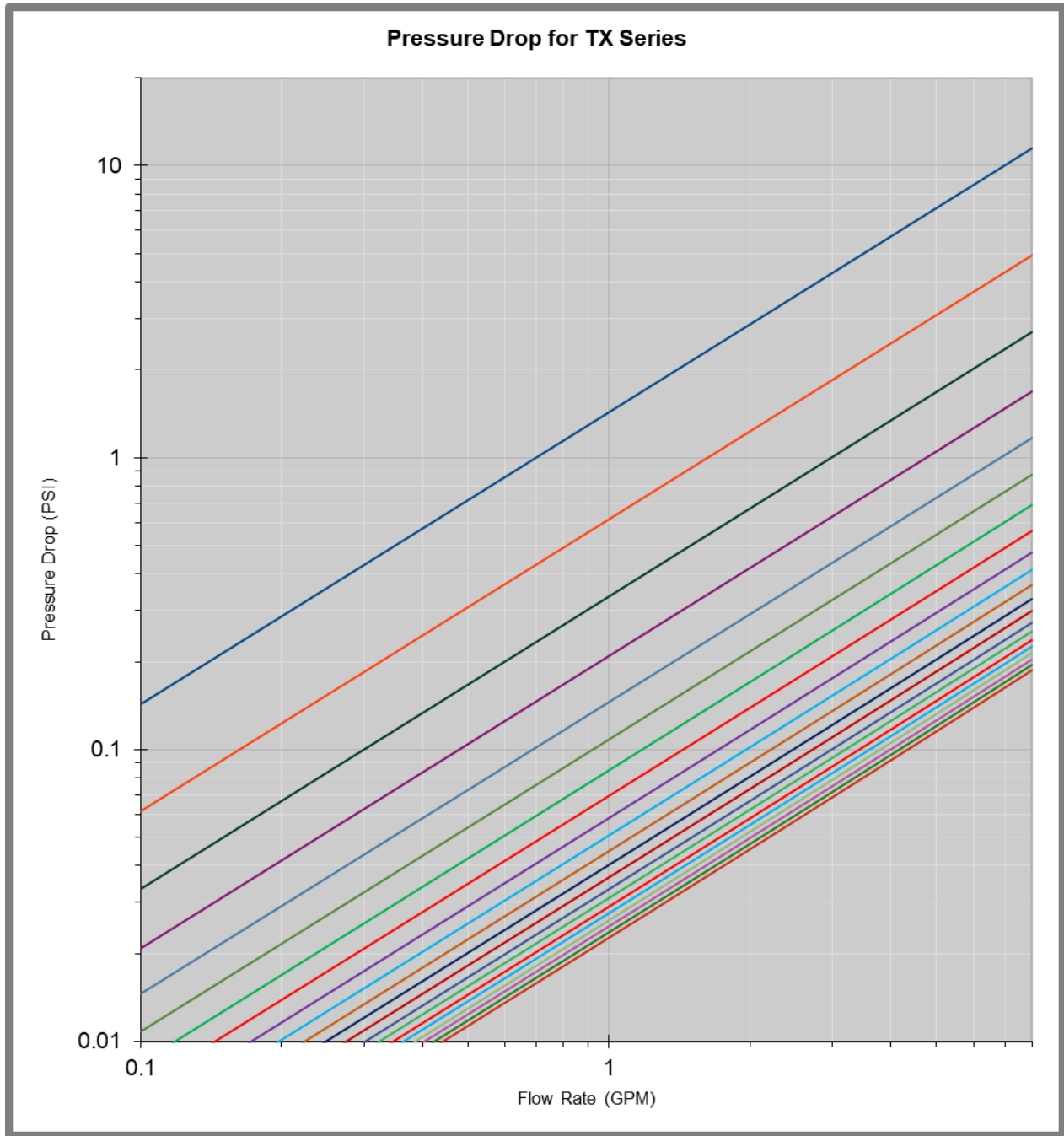
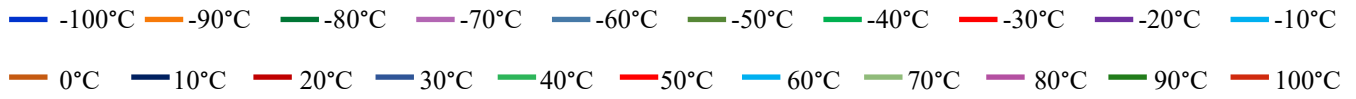
Technical Drawing



Note: All dimensions in inches.

TX Series

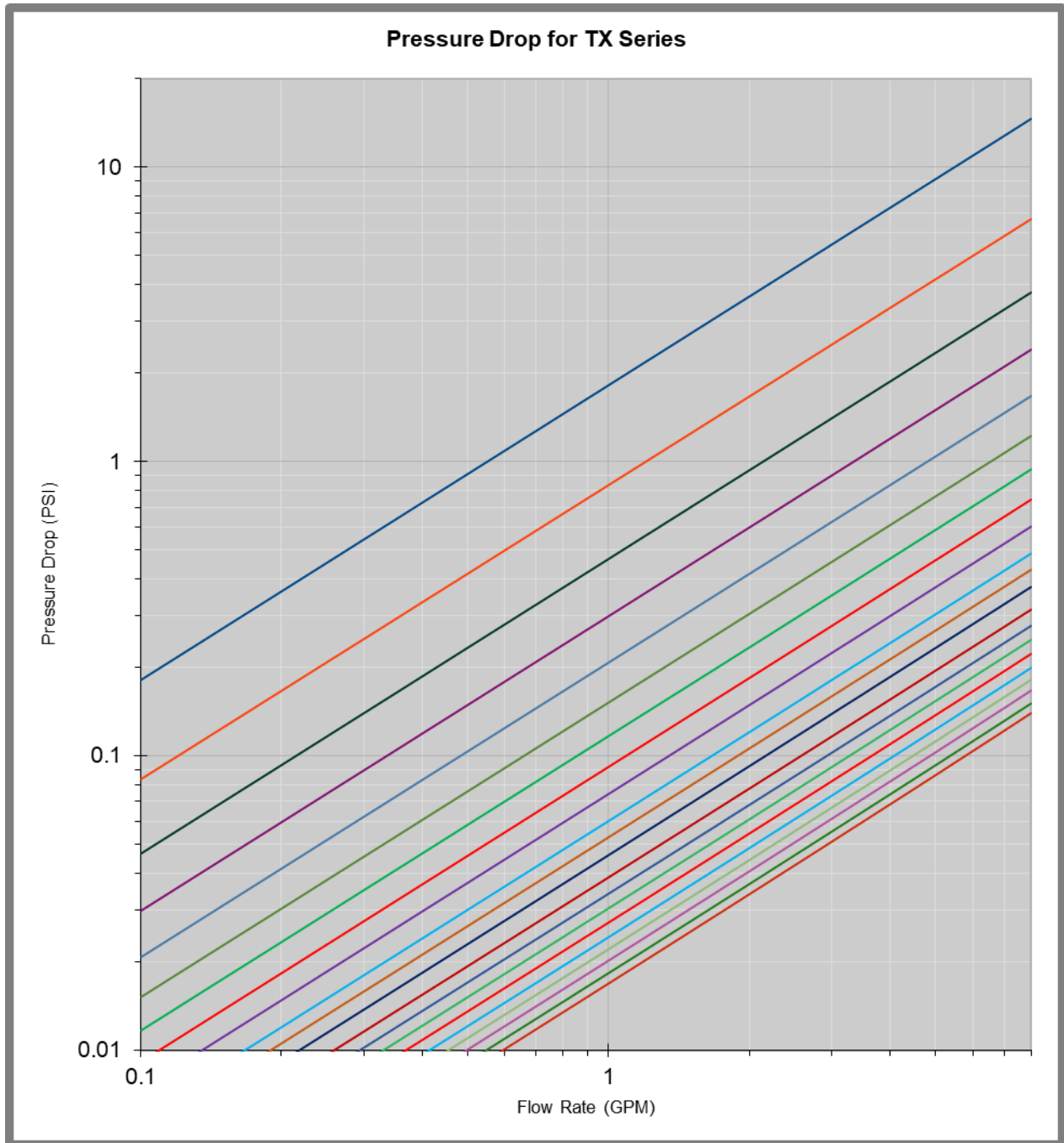
Hydraulic Properties: Dynalene MV



TX Series

Hydraulic Properties: HF-LO

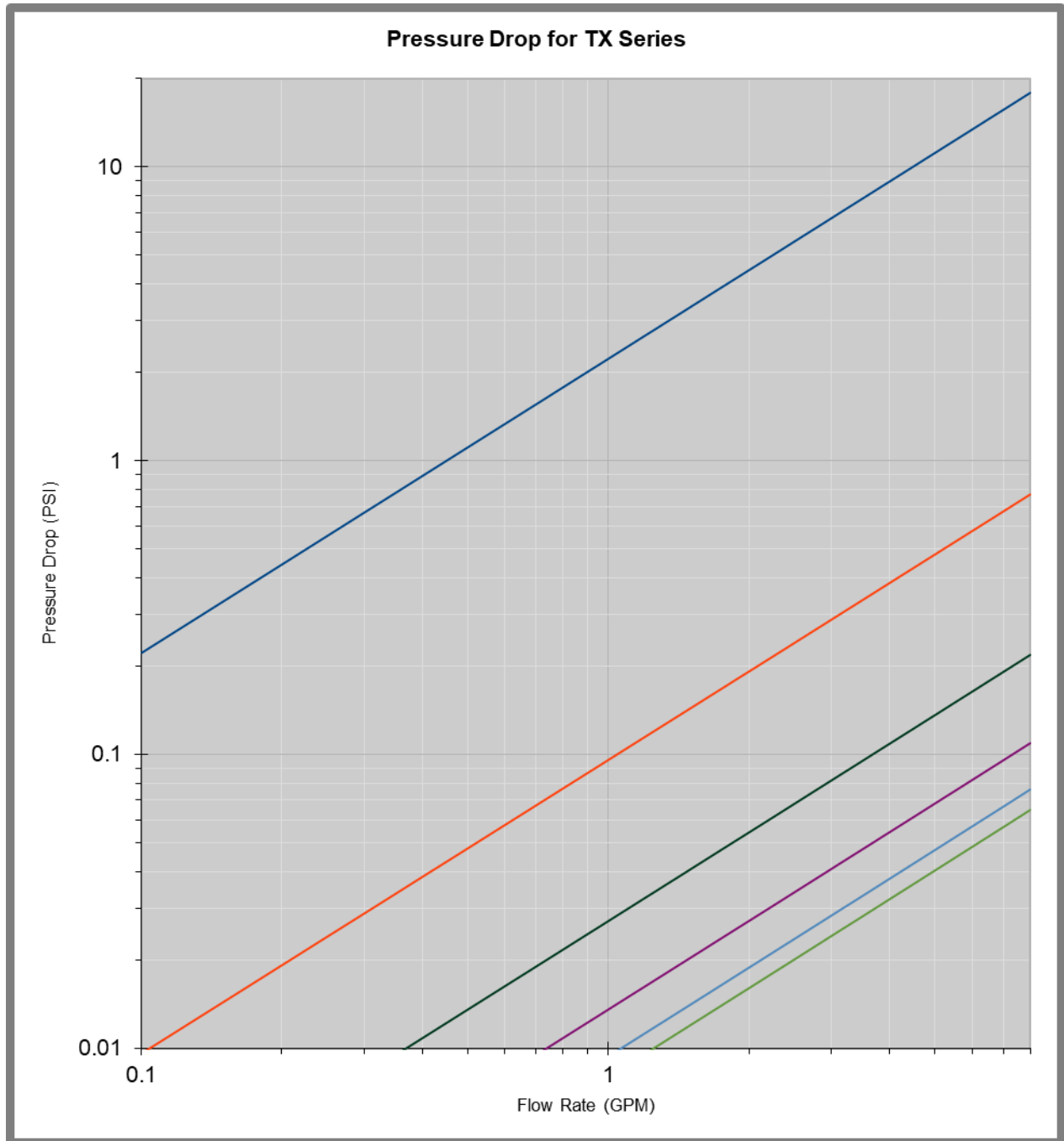
- 70°C -60°C -50°C -40°C -30°C -20°C -10°C 0°C 10°C 20°C
- 30°C 40°C 50°C 60°C 70°C 80°C 90°C 100°C 110°C 120°C 130°C



TX Series

Hydraulic Properties: Syltherm XLT

— -100°C — -20°C — 60°C — 140°C — 220°C — 280°C



HX Series

HX Series

The HX series moisture removal system is a high performance device that is specifically designed for user-friendly experience in maintaining low moisture content in a variety of non-aqueous heat transfer fluids as well as refrigerants and lubricants.

Features

- Equipped with connections for gauges and a nitrogen blanket or vacuum, which can help avoid internal ice formation when operating at low temperatures.
- Drain port is provided to help drain fluid in the event of an internal spill.
- Cartridges in the system contain quick disconnect with automatic shut-off for easy handling and to avoid fluid spills.
- Can be adjusted to operate at different flow rates based on the moisture content in the fluid loop.
- Can be custom built to fit your specifications, including choice of pipe fitting, material of construction, pressure rating, gasket material, flow rate, and water removal capacity.



Traditional Moisture Removal System	HX Series Moisture Removal System
Creates spills during cartridge replacement	No spills during cartridge replacement
Creates a flammable atmosphere	Ideal for flammable fluid treatment
Creates fluid odor during change-out	Eliminates fluid odor during change-out
User-unfriendly and heavy desiccant baskets	User-friendly and easy cartridge change-out
Designed for a particular flow rate	Adjustable for different flow rates based on moisture content in the fluid loop

Customization

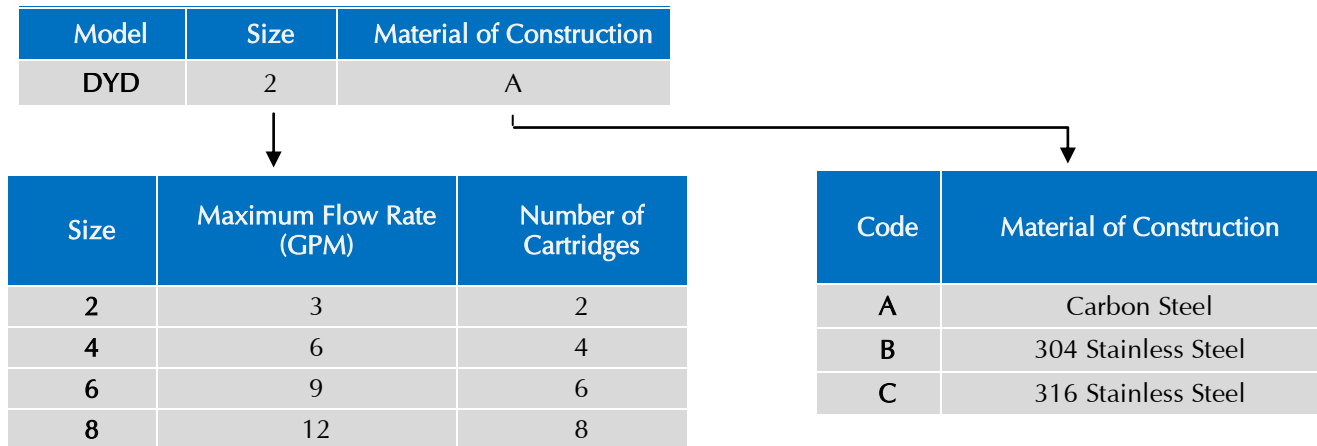
HX series desiccation system product offering provides an effective, easy to handle, and economical moisture removal solution in hydrocarbon and silicone based heat transfer fluids. The system can be custom designed and manufactured to meet your requirements. Contact us at [610.262.9686](tel:610.262.9686) or email at info@dynalene.com and discuss your application with our fluid experts today.

HX Series

Specifications

Size	2, 4, 6 and 8 cartridge system
Flow rate	3 to 16 GPM
Water Capacity at @ 25°C	1 to 5 lbs per cartridge change out
Material of construction	Carbon Steel, 304 Stainless Steel and 316 Stainless Steel
Gasket material	Buna-N, Viton® and Teflon® (Customization available)
Inlet/outlet type	NPT and flange connection (Customization available)
Pressure rating	100 and 150 PSI
Pipe connections	1, 2, 3, 4 inch
Support stand	Custom tripod leg assembly or stands with wheels
Footprint of the system	19 x 52 inch to 33 x 52 inch
Cartridge size	5 x 20 inch

Ordering Information

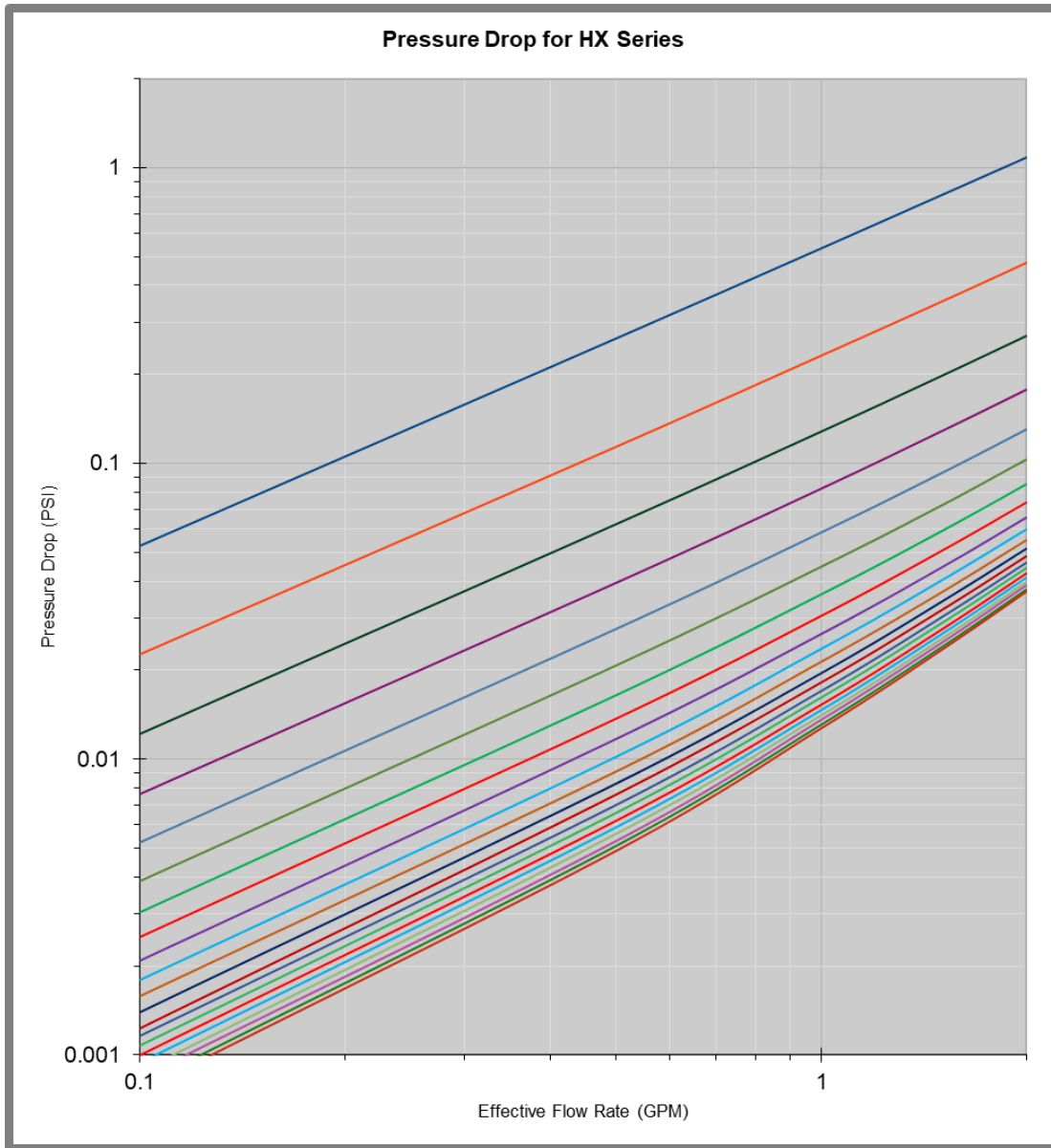


Along with the standard size moisture removal systems, we can also offer custom designed systems that meet your requirements. Contact us at [610.262.9686](tel:610.262.9686) or email at info@dynamene.com and discuss your application with our fluid experts today.

HX Series

Hydraulic Properties: Dynalene MV

— -100°C — -90°C — -80°C — -70°C — -60°C — -50°C — -40°C — -30°C — -20°C — -10°C
— 0°C — 10°C — 20°C — 30°C — 40°C — 50°C — 60°C — 70°C — 80°C — 90°C — 100°C



Size	Flow Factor
2	2
4	4
6	6
8	8

The Pressure drop for size 2, 4, 6, and 8 can be determined by the following formula

$$Effective\ Flow\ Rate = \frac{Desired\ Flow\ Rate}{Flow\ Factor}$$

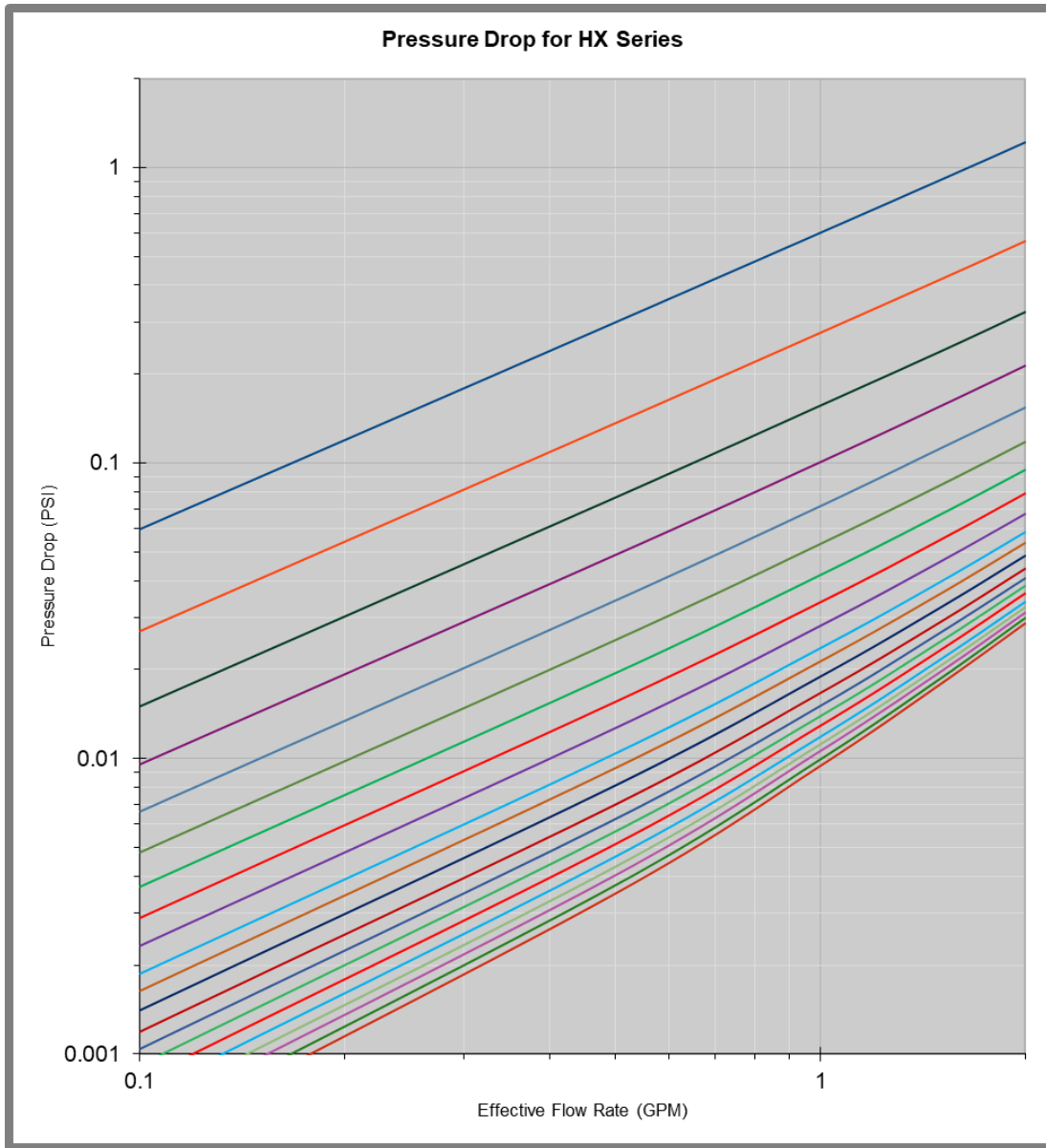
“Effective Flow Rate” is flow rate through each cartridge.

“Desired Flow Rate” is actual flow rate through the desiccation system

HX Series

Hydraulic Properties: HF-LO

— -70°C
 — -60°C
 — -50°C
 — -40°C
 — -30°C
 — -20°C
 — -10°C
 — 0°C
 — 10°C
 — 20°C
— 30°C
— 40°C
— 50°C
— 60°C
— 70°C
— 80°C
— 90°C
— 100°C
— 110°C
— 120°C
— 130°C



Size	Flow Factor
2	2
4	4
6	6
8	8

The Pressure drop for size 2, 4, 6, and 8 can be determined by the following formula

$$Effective\ Flow\ Rate = \frac{Desired\ Flow\ Rate}{Flow\ Factor}$$

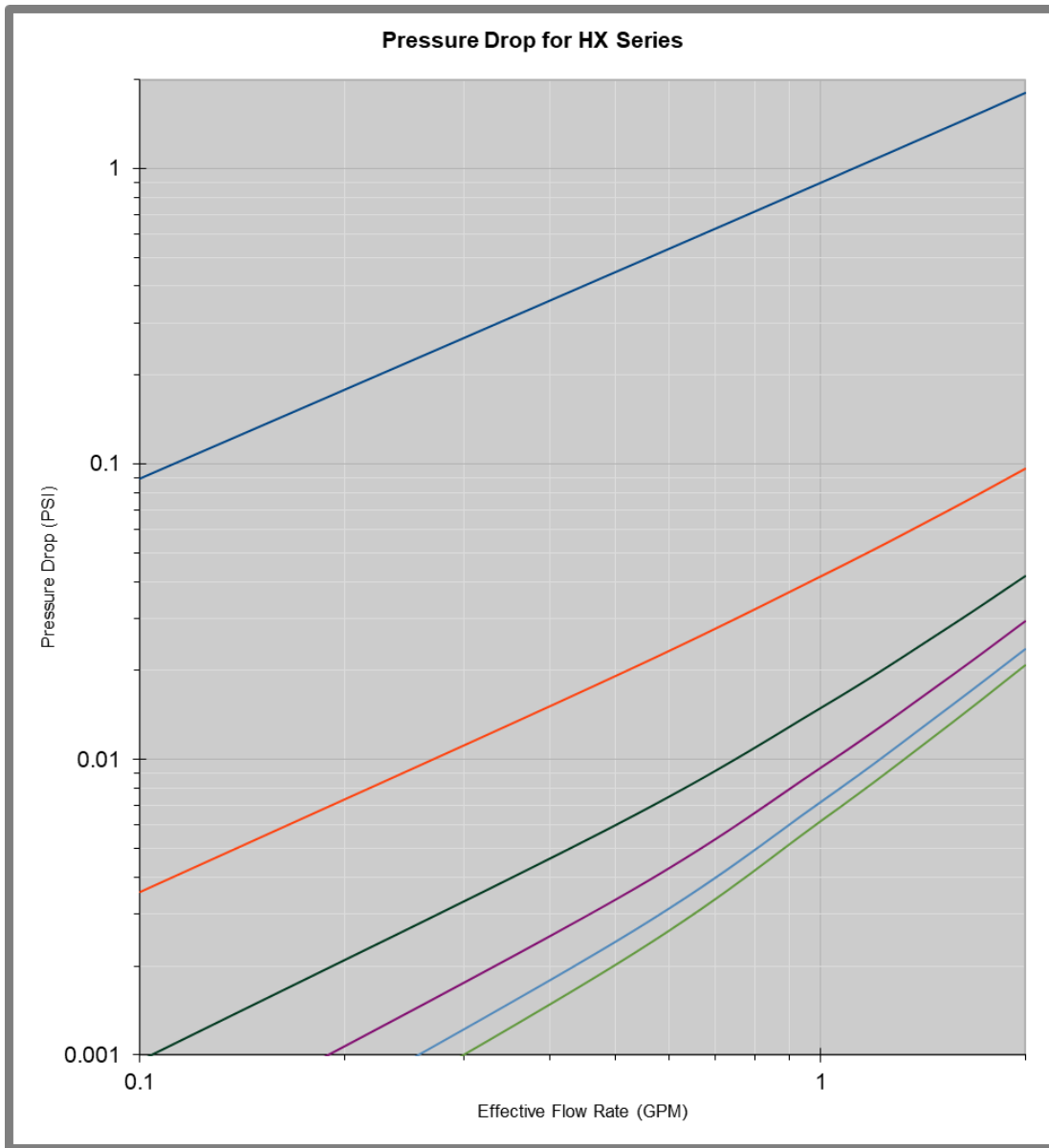
“Effective Flow Rate” is flow rate through each cartridge.

“Desired Flow Rate” is actual flow rate through the desiccation system

HX Series

Hydraulic Properties: Syltherm XLT

— -100°C
 — -20°C
 — 60°C
 — 140°C
 — 220°C
 — 280°C



Size	Flow Factor
2	2
4	4
6	6
8	8

The Pressure drop for size 2, 4, 6, and 8 can be determined by the following formula

$$Effective\ Flow\ Rate = \frac{Desired\ Flow\ Rate}{Flow\ Factor}$$

“Effective Flow Rate” is flow rate through each cartridge.

“Desired Flow Rate” is actual flow rate through the desiccation system

M Series Desiccant

Series Overview

M series desiccant is an alkali aluminosilicate-based molecular sieve that is designed for maximum moisture adsorption capacity in hydrocarbon and silicone heat transfer fluids. These desiccants are also used in drying lubricants, natural gas, paints, etc.

Applications

- Refrigerant drying
- CO₂ drying in LPG, air, inert gas, natural gas and other atmospheric gases.
- Moisture removal in paint

Chemical Formula

$\text{Na}_2\text{O}\cdot\text{Al}_2\text{O}_3\cdot 2\text{SiO}_2\cdot n\text{H}_2\text{O}$

Specification

Property	Value
Apparent Density	46 lb/ft ³
Water Content as Shipped	1.5% by weight
Heat of Adsorption	1800 BTU/lb H ₂ O
Equilibrium water capacity	≥ 22% weight
Bead Size	8 x 12 mesh
Bulk density	≥ 42 lb/ft ³
Packing moisture	≤ 1.5% weight
Operating temperature	65°F to -170°F

Additional Information

M series desiccant is used in the Fluidry[®] series desiccation systems. This desiccant is designed and tested extensively for greater moisture removal capacity on our hydrocarbon-based heat transfer fluid products. Along with the standard products, we can also custom-design moisture removal products that meet your requirements. Contact us at [610.262.9686](tel:610.262.9686) or email at info@dynalene.com and discuss your application with our fluid experts today.

Contact Information



Dynalene Inc
5250 West Coplay Road Whitehall, Pennsylvania 18052
Phone: 610.262.9686
Fax: 610.262.7437
Email: info@dynalene.com
Website: www.dynalene.com

©2017 Dynalene Inc. All Rights Reserved. Printed in USA, November 2017