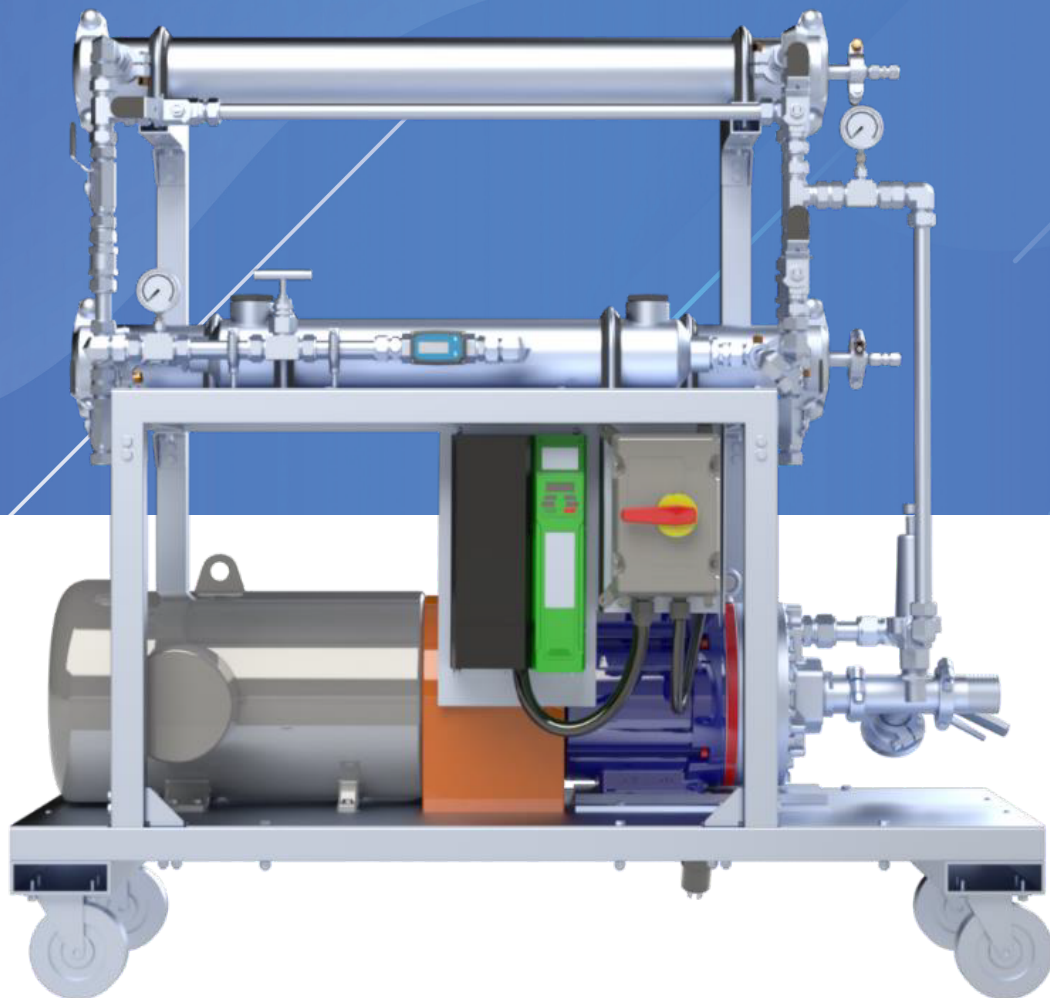


STERLITECH

C o r p o r a t i o n

Sterlitech™ Analog Production System Owner's Manual



Introduction

The Sterlitech™ Analog Production Skid System allows for filtration at a full range of flows and pressures for 4040 spiral-wound elements. This high-capacity system is manually operated and achieves flow rates of up to 34 GPM and 1000 PSI, allowing for use across MF, UF, NF, and RO applications. The skid features two selectable configurations:

- Series: For maximum output with 15+ m² of active membrane area.
- Parallel: For independent manual operation of a multistage membrane process.

System Features

System Feature	Description
Cell Type	2x 4040 Spiral Wound Membrane Housings
Configuration	2 Lines, Series or Parallel
Feed Flow Rate	129 LPM (34 GPM)
Feed Tank	2-1/2" Sanitary Connection Port Optional: LLDPE, Full Drain, Conical, 208 Liter (55 Gallon)
Feed Controls	Manual Concentrate Control Valve
Max Pressure	69 bar (1000 PSI)
Electrical Supply	460V, 50/60 Hz, 3 Ph
Motor Rating	Baldor Washdown Motor: 30 HP, 39.0 A, 1200 RPM, 460V, 60 Hz, 3 Ph
Pump	Hydra-Cell, High Pressure SS Diaphragm Pump
Variable Frequency Drive (VFD)	Input: 460V, 50/60 Hz, 3 Ph Output: 460V, 60 Hz, 3 Ph

Materials of Construction

Location	Materials
Pump	316L SS / FKM / Nitronic 50 / Elgiloy / Polypropylene
Plumbing	316L SS / FKM / PTFE / Polypropylene
Cell/Housing	316L SS / EPDM / FKM

Use this [Chemical Compatibility Chart](#) to check the compatibility of your process fluid with the wetted parts. For fluids not listed, contact Sterlitech.

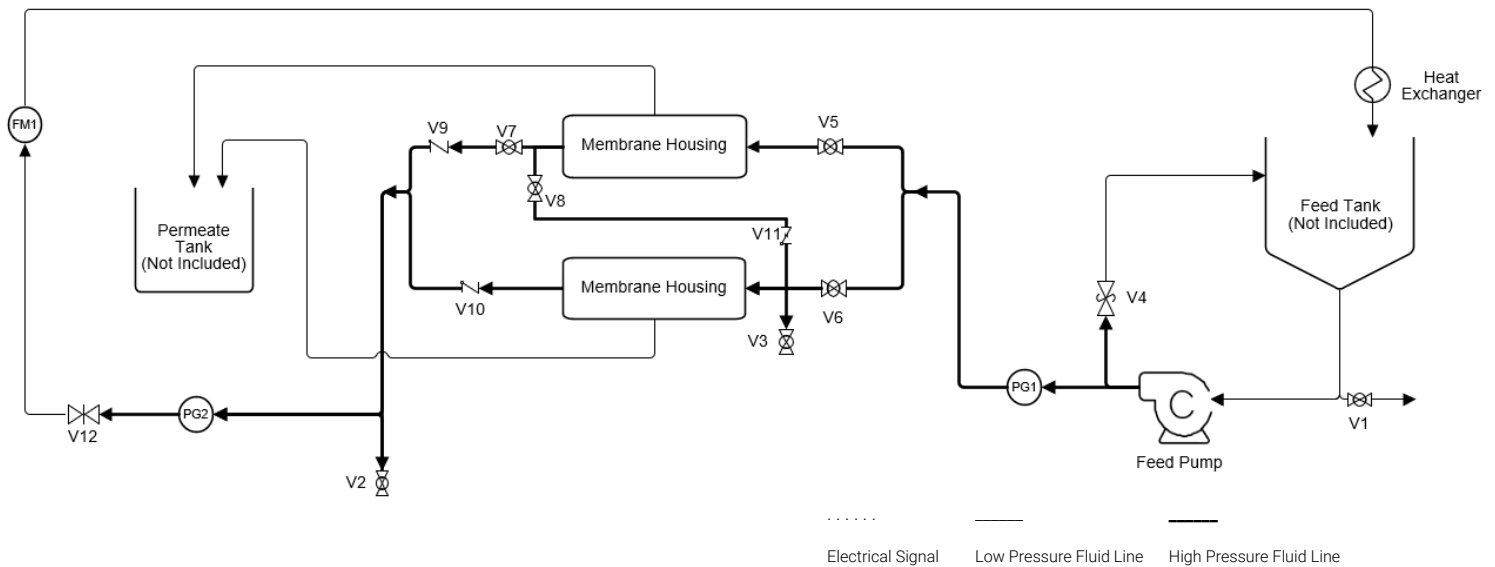
Temperature Limit

The system should not be operated above 180°F (82°C). The membranes, feed/permeate spacers, O-rings, and cell body material may contribute to lower the actual temperature of the system.

**Maximum pressure and temperature ratings are dependent on a variety of factors. Listed values are guidelines based upon material properties and cannot be guaranteed in every application.*

***The materials listed are the standard materials of construction for this model and are subject to change.*

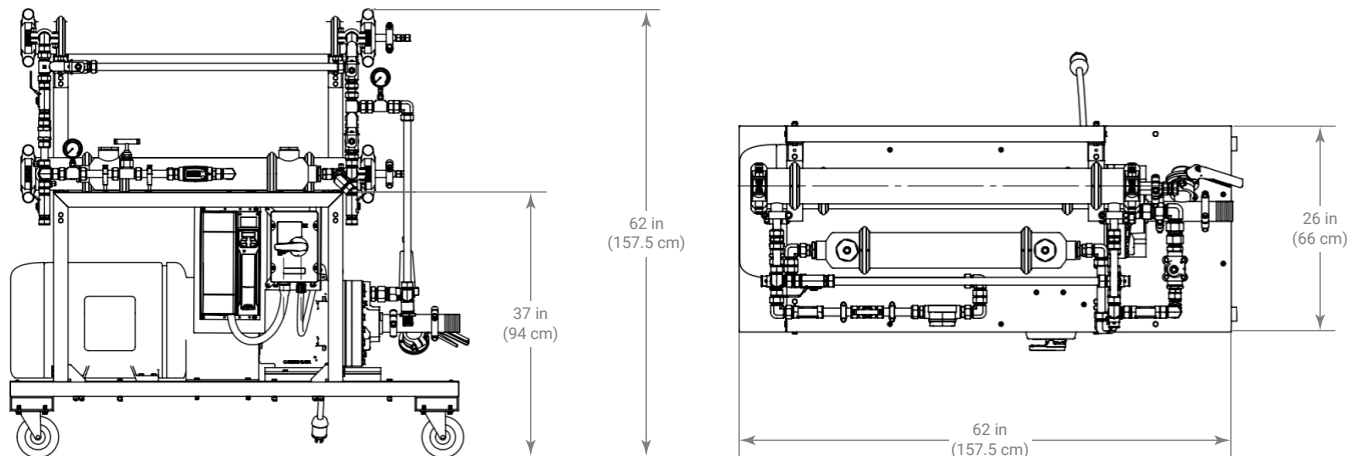
System Diagram



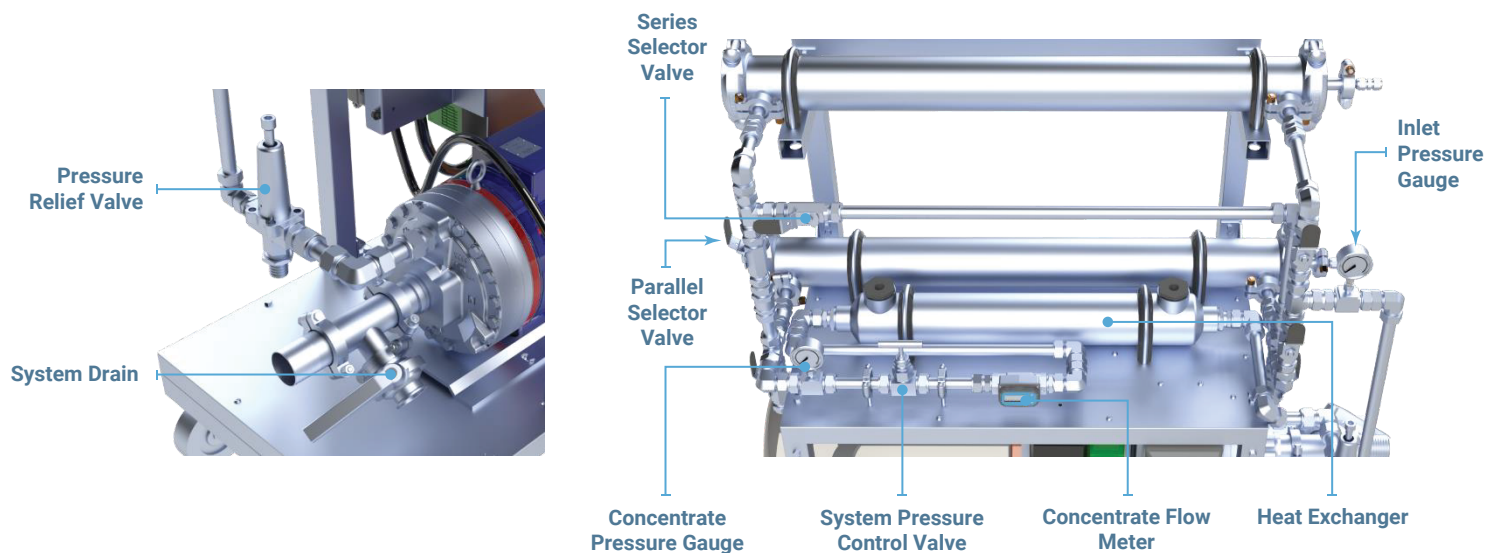
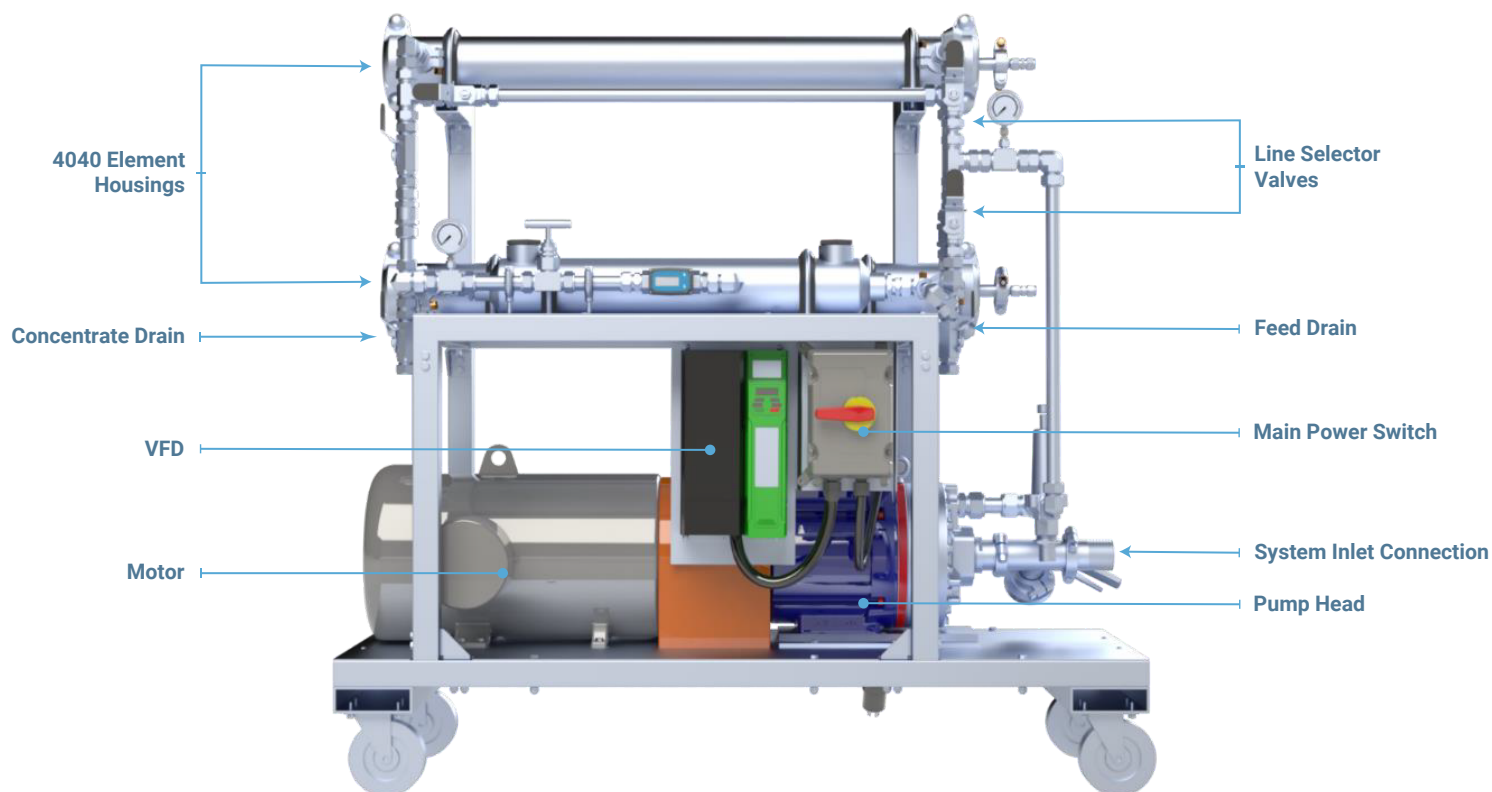
Legend

V1	Drain Valve (Tank)	V9	Back Flow Preventer Valve #1
V2	Drain Valve (Concentrate)	V10	Back Flow Preventer Valve #2
V3	Drain Valve (Feed)	V11	Back Flow Preventer Valve #3
V4	System Pressure Relief Valve	V12	System Pressure Control Valve
V5	Bank Selector Valve #1	PG1	Feed Pressure Gauge
V6	Bank Selector Valve #2	PG2	Concentrate Pressure Gauge
V7	Parallel Selector Valve	FM1	Concentrate Flow Meter
V8	Series Selector Valve		

System Dimensions



Feature Identification



Basic Operating Resources

Skid System Video Resources

Including:

- Initial Setup
- Chiller Setup
- System Startup, Operation, and Shutdown
- Fluid Recovery Process

Additional Operation Resources

- **System Testing Best Practices**
- [CF Filtration Handbook](#)

Includes:

- Basics of Forward Osmosis Filtration
- FAQs
- Example Studies
- Cutting Custom Membrane Filters
- Preconditioning Membranes
- Temperature Effect on Membranes
- [Compression Connection Video](#)
- [Cutting Custom Membrane Filters](#)



Troubleshooting Resources

Online we have many video references should you encounter any issues with your system. You can view these at this link:

[Membrane Process and Development Channel](#)

Maintenance

- **Pump Maintenance:** Refer to the [Pump Installation and Service Manual](#)
- **General Maintenance:** Proper flushing/cleaning is recommended after each run (e.g., brackish, seawater, or organic solvents). This will eliminate the formation of deposits/scales or corrosion of the system.

Replacement Accessories

Cell Type	Spare Parts Available	Spare Parts Link
4040 Housing	Alternative O-rings, Adapters, Membrane Elements	Spiral Wound Housings Sterlitech

Return Material Order Procedure

If materials are to be returned to Sterlitech for repair, evaluation, or warranty consideration, a Return Material Authorization (RMA) number must be obtained from Sterlitech prior to the return. Contact Sterlitech Customer Service Department for return forms and procedures.

Be sure to include a complete, detailed written reason for the return. Also, include serial numbers, installation and removal dates, and any other pertinent information that is available. The crossflow cells have a serial number imprinted on them.

Indicate the proposed disposition of the material and reference the RMA number on all packages or cartons. All material must be shipped to Sterlitech with freight prepared by the customer.

Warranty

The following is made in lieu of all other warranties expressed or implied. Sterlitech Corporation guarantees equipment to be free from defects in material and workmanship when operated in accordance with written instructions for a period of one year from receipt. Parts not manufactured by Sterlitech are covered by their manufacturer's warranties, which are normally for one year.

For Sterlitech skids and systems, material compatibility with liquids is not covered by warranty. The end user is responsible for ensuring compatibility due to variable factors, such as the processing fluids used, operating conditions, and cleaning procedures.

The manufacturer's and seller's only obligation shall be to issue credit against the purchase or replacement of equipment proved to be defective in material or workmanship. Neither manufacturer nor seller shall be liable for any injury, loss or damage, direct or indirect, special or consequential, arising out of the use of, misuse, or the inability to use such product.

The information contained herein is based on technical data and tests, which we believe to be reliable, and is intended for use by persons having technical skill at their discretion and risk. Since conditions of use are outside Sterlitech's control, we can assume no liability whatsoever for results obtained or damages incurred through the application of the data presented.

This information is not intended as a license to operate under, or a recommendation to infringe upon, any patent of Sterlitech or others covering any material or use.

The foregoing may not be altered except by a written agreement signed by officers of the manufacturer.

Technical Assistance: sales@sterlitech.com

Please contact us if you have any questions or technical inquiries about our products.

Company Background

Founded in 2001 in Kent, WA, Sterlitech Corporation manufactures and markets filtration-focused laboratory products to a broad spectrum of scientific and industrial sectors. Its line of flat sheet membranes and tangential flow cells deliver industry-leading performance and reliable results. Configured for reverse osmosis, nanofiltration, ultrafiltration, and microfiltration applications, Sterlitech's benchtop cross flow membrane test system provides the versatility required to innovate.

Sterlitech's comprehensive line of products is supported by the expertise of its technical specialists who can assist with application-specific product selection, and provide customized solutions where necessary. Unique problem-solving approaches, flexibility, and consistent quality have made Sterlitech Corporation a renowned global provider of filtration products and equipment.

Sales Inquiries

Email: sales@sterlitech.com

Accounts Payable

Email: AP@sterlitech.com

Accounts Receivable

Email: AR@sterlitech.com

Press Inquiries

Email: PR@sterlitech.com



STERLITECH

4620 B Street NW, Suite 101
Auburn, WA 98001 USA
Tel: 877-544-4420 or 1-253-437-0844
Fax: 1-253-437-0845
Email: info@sterlitech.com

© 2024 Sterlitech Corporation