



## Ultrafiltration Machine Piping Schematic

- Symbols**
- = Normally Closed Valve (NC)
  - = Normally Open Valve (NO)
  - = Throttled Valve (T)
  - = Solenoid Valve Normally Closed (NC)
  - = TigerMag EP Flowmeter
  - = Pressure Gauge & Seal (Px)
  - = Tee
  - = Direction of Flow
  - = Bag Filter
  - = Ultrafilter
  - = Optional
  - = CIP Option
  - = BF Option
  - = Optional Accessory
  - = Piping & accessories by customer

\*\*Siphon breakers are required whenever the UF System is installed at a point higher than the paint tank. Without a siphon breaker, paint draining back to the tank can (and has) caused delamination of the UF membrane through drawing the permeate back through the membrane. If pump is >20% the required flow for the UF Machine.

### Valve Tag Location Chart

V1-*	Permeate to Rinse
V2-*	Permeate to Clean Tank
V3-*	Module Paint Outlet
V4-*	Module Clean Outlet
V5-*	Module Paint Inlet
V6-*	Module Clean Inlet
V7	CIP Pump Discharge
V8	CIP Pump Suction
V9	Main Paint Outlet
V10	Main Paint Inlet
V11	Main Permeate to Rinse
V12	Permeate Flowmeter on CIP for Purge/Sample
V13	Clean Permeate to CIP Tank
V14	Permeate to CIP Tank
V15	CIP Clean Tank to Drain or Paint Bath
V16	CIP Clean Tank Cooling Feed
V16S	CIP Clean Tank Solenoid Valve to Cooling Feed
V17	Shut-Off to Pressure Gauge P2 on Outlet Manifold
V18	Air Purge on Outlet Manifold
V19	Shut-Off to Pressure Gauge P1 on Inlet Manifold
V20	Clean Return to CIP
V21	Flush and Drain to Paint Bath
V22	Shut-Off to Pressure Gauge P3 on BF of CIP
V23	CIP BF Drain or to Paint Bath
V24	Shut-Off to Pressure Gauge P4 on Balancing Manifold
V25-*	From BF to Balancing Manifold (Outlet to UF)
V26-*	From Inlet Paint Manifold to BF (Inlet to BF)
V27-*	BF Drain to Paint Bath or Drain
V28-*	Shut-Off to Air Purge
V29	Shut-Off to Pressure Gauge P5 (Permeate Manifold)
V30	N/A
V31	Balancing Manifold Drain to Paint Bath or Drain
V32	Permeate Shut-Off after Turbidity Sensor

Allow 5 x Pipe  $\varnothing$  of straight and constant  $\varnothing$  pipe run on both sides of Magnetic Flow Meter.

Allow 30 x Pipe  $\varnothing$  of straight and constant  $\varnothing$  pipe run for portable transit time flowmeter installation.

Duplex Bag Filter is only required when the BF option is not selected. \*\*\*Duplex Filter Req'd\*\*\*

VP3†

VP1

UF Feed Pump

ED Tank

Vacuum Breaker - Locate at high point for elevated UF System\*\*

Last Rinse Stage or Permeate Storage

### UF, Flow, Single, Basic + BF + CIP

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Date:			
UFS Part No. 997303		Sheet:	1/1
		Revision:	0
		Units:	mm
		Scale:	None

XXXXXX = Part Number



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