

ProMinent® Engineered Systems

ProMinent®

ProMinent offers a variety of pre-engineered, fabricated metering and control packages, as well as design and fabrication of custom systems.

Engineering services include process design, P&ID development, producing CAD drawings for layout, general arrangements, shop electrical drawings, as-builts, custom operation instructions and maintenance manuals.

Production capabilities include threaded, welded and thermal fusion joining systems for pipe; system assembly; wiring and equipment support and testing (with criteria for electrical, control, mechanical and aesthetic features).

Standard materials available for chemicals commonly used on wetted components are: 316 SS, Kynar (PVDF), Teflon (TFE), PVC, Polypropylene, and acrylic; common sealing materials are Teflon, Viton®, and EPDM. Materials such as Alloy 20, CPE, Hastelloy C-276 and virgin plastics are available upon request.

The system engineering services or applied products capabilities of ProMinent are offered in three areas:

- Custom Engineered Chemical Metering and Control Systems
- Standard Chemical Metering Packages
- Prototype Development

All system packages are fully assembled and tested prior to shipment. Each piece of equipment is checked for hydrostatic functionality and aesthetic qualities – guaranteed!

Custom Engineered Chemical Metering and Control System

Clients requiring adherence to plant specifications require a custom approach to meet standards while still providing an effective and economical chemical delivery system. ProMinent provides engineering services to customer specification and also offers commissioning and on-site operator training services.

Standard Chemical Metering Packages

ProMinent provides proprietary manufacturing and minimal stocking (subject to blanket orders) of customer specific chemical metering and control packages.

Standard packages include:

- Single and dual dosing units for capacities up to 20 gph (75 L/h) (S1, S2)
- Single and dual dosing units for capacities up to 208 gph (787 L/h) (M1, M2)
- Monitoring packages for either one or two controllers - including sample line sensor, analyzer, controller and customer interface block (PCM)



Standard single dosing unit (S-1) with a gamma/L metering pump mounted on a UV protected Polyethylene (PE) stand.

A 0-5 gpm liquid polymer makedown system (P Series) is also available.

Prototype Development

Specialized chemical feed and control prototype development services for commercialization are available and subject to a confidentiality agreement.



Custom engineered chemical metering and control systems ensure plant specifications and industry standards are met.

CUSTOM SYSTEM REQUIREMENTS

SECTION 1: General Quote Information

1.1	Sales Person	_____
1.2	Company / Contact Name	_____
1.3	Project Name	_____
1.4	Date Quote Required	_____
1.5	Drawing for Approval Required	<input type="checkbox"/> Yes <input type="checkbox"/> No

SECTION 2: Chemical

2.1	Process Fluid / Chemical	_____
2.2	Working Temperature (min./max.)	_____
2.3	Concentration (%)	_____
2.4	Solids Content (%)	_____
2.5	Viscosity (cP)	_____
2.6	Class Designation (Class, Division, Group)	_____

SECTION 3: Metering Pump

3.1	Desired Capacity (min./max.)	_____ gph	_____ l/h
3.2	Backpressure (min./max.)	_____ psig	_____ bar
3.3	Suction Lift	_____ ft.	_____ m
3.4	Length of Suction Line	_____ ft.	_____ m
3.5	Discharge Head	_____ ft.	_____ m
3.6	Length of Discharge Line	_____ ft.	_____ m
3.7	Suggested Liquid End Material	<input type="checkbox"/> PVC <input type="checkbox"/> PP <input type="checkbox"/> NP <input type="checkbox"/> PTFE <input type="checkbox"/> 316 SS <input type="checkbox"/> PVDF	
3.7.1	Suggested Liquid End Seal	<input type="checkbox"/> EPDM <input type="checkbox"/> VITON® <input type="checkbox"/> PTFE	
3.7.2	Auto-degassing Liquid End Required (Y/N)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.8	Backup Pump Required (Y/N)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.9	Pump Control	<input type="checkbox"/> Pulse <input type="checkbox"/> 4-20 mA <input type="checkbox"/> Manual	

SECTION 4: Skid / Chemical Tanks

4.1	Skid Material	<input type="checkbox"/> 304 SS <input type="checkbox"/> PP/PE <input type="checkbox"/> Other
4.2	Skid Size (max.)	Width: _____ Length: _____ Height: _____
4.3	Required Skid Inlet / Outlet Connection	<input type="checkbox"/> NPT <input type="checkbox"/> Hose Barb <input type="checkbox"/> Flange
4.4	Suggested Pipeline Material	<input type="checkbox"/> PVC <input type="checkbox"/> CPVC <input type="checkbox"/> 316 SS <input type="checkbox"/> PVDF <input type="checkbox"/> Other
4.5	Required Tank Capacity	_____
4.6	Tank Size (max. dia., max. height)	_____
4.7	Suggested Tank Material	<input type="checkbox"/> PE <input type="checkbox"/> PP <input type="checkbox"/> FRP <input type="checkbox"/> 316 SS <input type="checkbox"/> Other
4.8	Tank Mounted on Skid	<input type="checkbox"/> Yes <input type="checkbox"/> No

NOTE: 1. Please indicate required Tank Fittings on attached process sketch.
 2. Please provide simple sketch of process

SECTION 5: Electrical

5.1	Available Power Supply	_____ VAC	_____ Hz	_____ Phase
5.2	<input type="checkbox"/> Duplex Receptacle <input type="checkbox"/> Interface Panel <input type="checkbox"/> Power Panel <input type="checkbox"/> Control Panel			
5.3	Junction Box / Control Panel Mounted on Skid	<input type="checkbox"/> Yes <input type="checkbox"/> No		

NOTE: Please attach detail description of Control Panel if required.

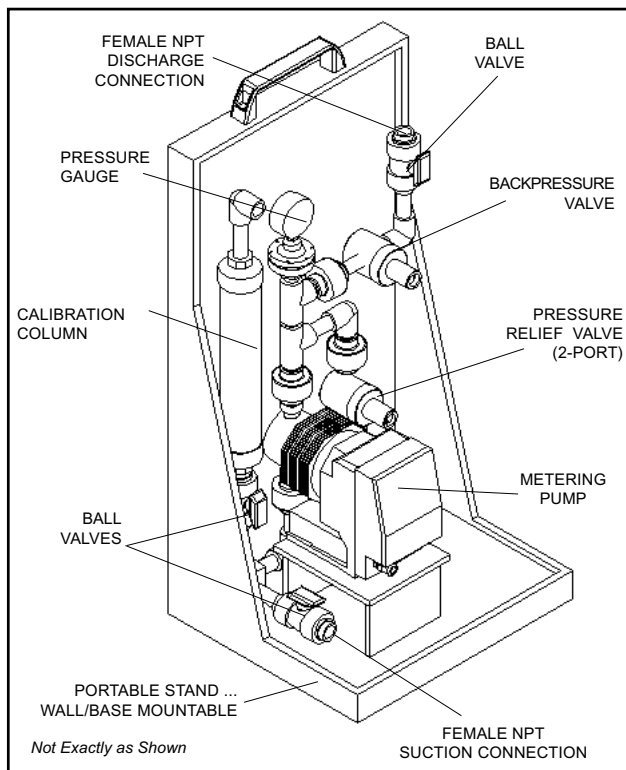
SECTION 6: Other comments: _____

SKETCH OF PROCESS

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for a hand-drawn sketch of a process.

Single Metering Pump Dosing Package (to 20 gph, 75 L/h)

S1 Series



FEATURES

- Portable, with simple pump hook-up, this self-contained package with integrated calibration column is ideal for chemical trials and for permanent or emergency chemical injection.
- Suitable for ProMinent beta, gamma and Vario 1/2" chemical metering pumps with a maximum capacity up to 20 gph (75 L/h).
- Polished Stainless Steel (SS), or UV protected Polypropylene (PP) and Polyethylene (PE) stands provide superior chemical resistance and durability. Stands are available in compact or full sizes.
- Available with 150# 316 SS or Schedule 80 PVC, PVDF or CPVC piping materials.
- Predrilled holes makes for easy installation.

DESIGN SPECIFICATIONS

The system shall be a corrosion-resistant, completely self-contained package with chemical metering pump, and all necessary piping, appurtenances and fittings assembled and tested by the chemical metering pump manufacturer. The chemical metering pump, all piping, fittings and accessories shall be mounted to a stainless steel, PP or PE stand, predrilled for convenient horizontal or vertical mounting. The unit must be portable. The chemical metering pump shall be microprocessor-controlled, positive displacement and diaphragm-type. ProMinent beta, gamma, or Vario 1/2" metering pumps will be used as required.

Piping Materials: 316 SS, PVC, PVDF or CPVC

Connections: Suction Inlet - 1/2" FNPT
Discharge Outlet - Refer to Metering Pump Specifications in PFC Catalog

Dimensions:	SS Compact:	25 1/2" H x 12" W x 12" D	65 cm H x 30 cm W x 30 cm D
	SS Full:	32" H x 16" W x 13 1/2" D	81 cm H x 41 cm W x 34 cm D
	PE Compact:	27" H x 13 1/2" W x 12" D	68 cm H x 34 cm W x 30 cm D
	PE Full:	34" H x 17" W x 15" D	86 cm H x 43 cm W x 38 cm D

S1 PACKAGE CONFIGURATION

S1	0	0	0	0	0	0	0	0	0	0	0	0
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Series: Single Pump Package (for beta, gamma, and Vario 1/2" Chemical Metering Pumps)

Stand Assembly Type

1*	Compact SS (25.5"x12"x12")
2	Full size SS (32"x16"x13.5")
3*	Compact PP or PE, UV Protected, black (27"x13.5"x12")
4	Full size PP or PE, UV Protected, black (34"x17"x15")
S	Special Order

*****Self Filling Calibration Option**

	Valve	Seat/Seal	Piping
0	None	None	None
1	PVC	EPDM	PVC
2	PVC	Viton®	PVC
3	SS	PTFE	SS
4	PVDF	Viton®	PVDF
7	CPVC	Viton®	CPVC
S	Special Order		

Backpressure Valve

0	None
1	PVC
2	SS
3	PVDF
5	CPVC
S	Special Order

Ball Valve & Piping Assembly Type

	Valve	Seat/Seal	Piping	Connection
0	None	None	None	None
1	PVC	EPDM	PVC	Socket weld
3	PVC	Viton®	PVC	Socket weld
4	PVC	Viton®	PVC	Threaded
5	SS	PTFE	SS	Threaded
6	PVDF	Viton®	PVDF	Fusion weld
9	CPVC	Viton®	CPVC	Socket weld
S	Special Order			

Pressure Relief Valve

0	None
1	PVC
2	SS
3	PVDF
5	CPVC
S	Special Order

Pressure Gauge**

0	None
1	2" SS w/PVDF isolator
2	2" SS w/PVC isolator
3	2" SS w/SS isolator
5	2" SS gauge only (w/o isolator)
6	2" SS w/CPVC isolator
S	Special Order

Calibration Column

0	None
1	100 mL PVC
2	500 mL PVC
5	100 mL PVDF/Glass
6	500 mL PVDF/Glass
7	100 mL SS/Glass
8	500 mL SS/Glass
S	Special Order

*****Y-Type Sediment Strainer**

0	None
1	PVC
2	SS
4	CPVC
S	Special Order

Multi-Function Valve

0	None
1	Size I, PVDF, 145 psig (10 bar)
2	Size I, PVDF, 232 psig (16 bar)
3	Size II, PVDF, 87 psig (6 bar)
4	Size II, PVDF, 145 psig (10 bar)
5	Size III, PVDF, 145 psig (10 bar)
S	Special Order

*****Pulsation Dampener**

		mL	cu.in.
0	None		
1	PVC/Viton®	164	10
2	SS/PTFE	131	8
3	PVDF/PTFE	131	8
4	PP/EPDM	164	10
5	PVC/HYPALON®	164	10
S	Special Order		

*****Flow Monitor**

0	None
1	Type I, PVC
2	Type II, PVC
3	Type III, PVC
4	Type III, PVC w/bypass Assy.
5	Type I, PP
6	Type II, PP
7	Type III, PP
8	Type III, PP w/bypass Assy.
9	SS flow sensor w/ flow monitor
S	Special Order

S	1										
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PACKAGE

\$

PUMP

+\$

TOTAL

= \$

* Consult factory before specifying a compact sized stand.

** Pressure gauge and isolator are recommended when specifying a pulsation dampener and/or backpressure valve.

*** Must order a full size stand when purchasing this option

Viton® and HYPALON® are registered trademarks of Dupont Dow Elastomers.

NOTE: Please refer to the pump section in your PFC catalog for correct pump selection, identification, and pricing.

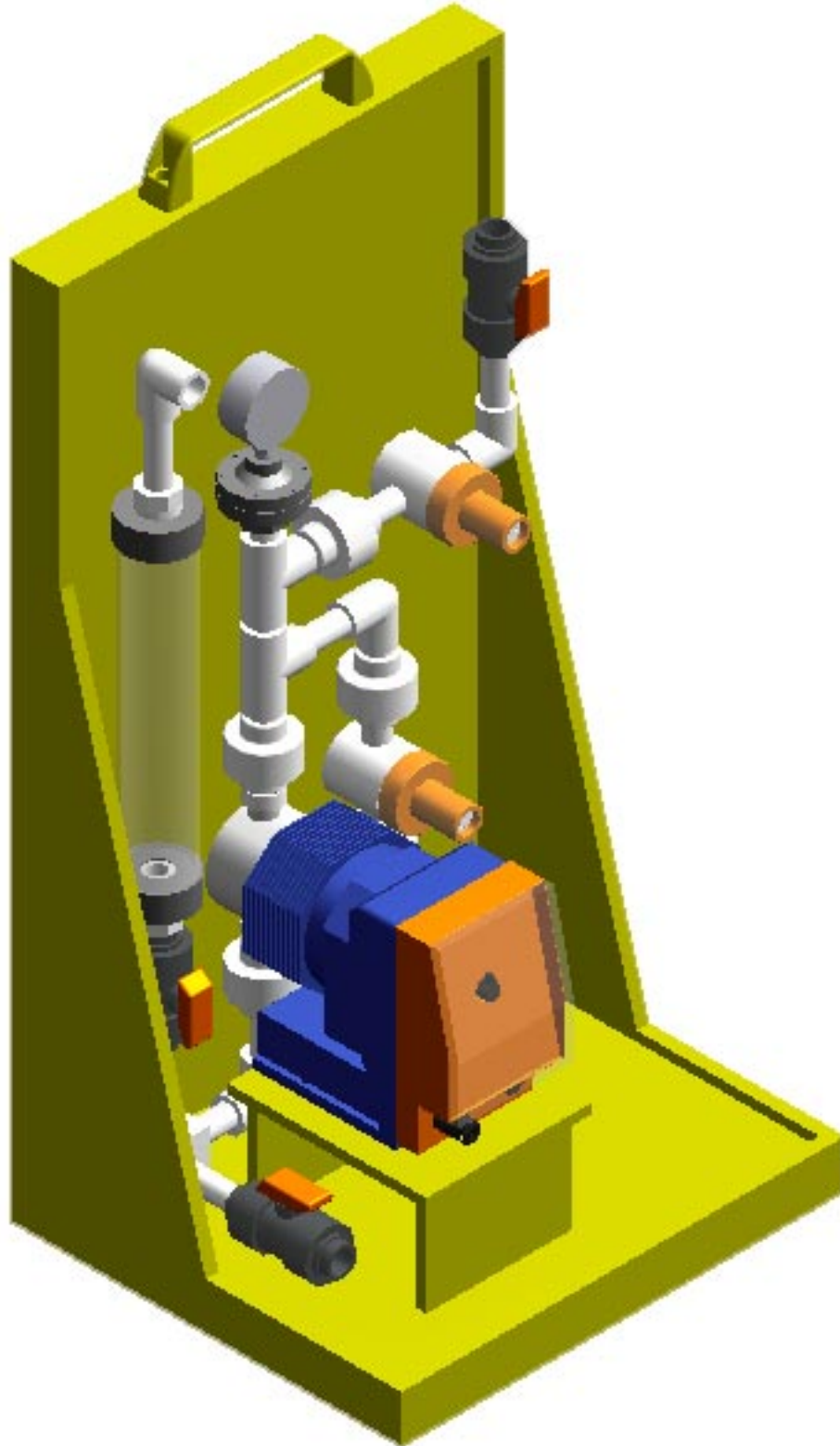
MATERIALS SPECIFICATIONS

1/2" Ball Valves, PVC True union design, socketweld PVC. EPDM or Viton® seals.	L-shaped Stands, SS 304 SS, 12 gauge, #4 finish 304 SS, 14 gauge, #4 finish pump riser
1/2" Ball Valves, SS Threaded 316 SS. PTFE seals.	
1/2" Ball Valves, PVDF True union design, fusion weld PVDF, Viton® seals.	L-shaped Stands PP or PE Polypropylene or Polyethylene, UV protected, black
1/2" Ball Valves, CPVC True union design, socket weld CPVC, Viton® seals, vented balls†.	1/2" Pipe and Fittings, PVC Socketweld and/or threaded, Schedule 80
Calibration Columns, PVC 100 mL, 2 mL grad., 1/2" FNPT 500 mL, 5 mL grad., 3/4" FNPT	1/2" Pipe and Fittings, SS Schedule 40 or 150# 316
Calibration Columns, SS 100 mL, 2 mL grad., 1/2" FNPT 500 mL, 5 mL grad., 3/4" FNPT	1/2" Pipe and Fittings, PVDF Fusion weld, Schedule 80
Calibration Columns, PVDF/glass 100 mL, 2 mL grad., 1/2" FNPT 500 mL, 5 mL grad., 3/4" FNPT	1/2" Pipe and Fittings, CPVC Socket weld, Schedule 80

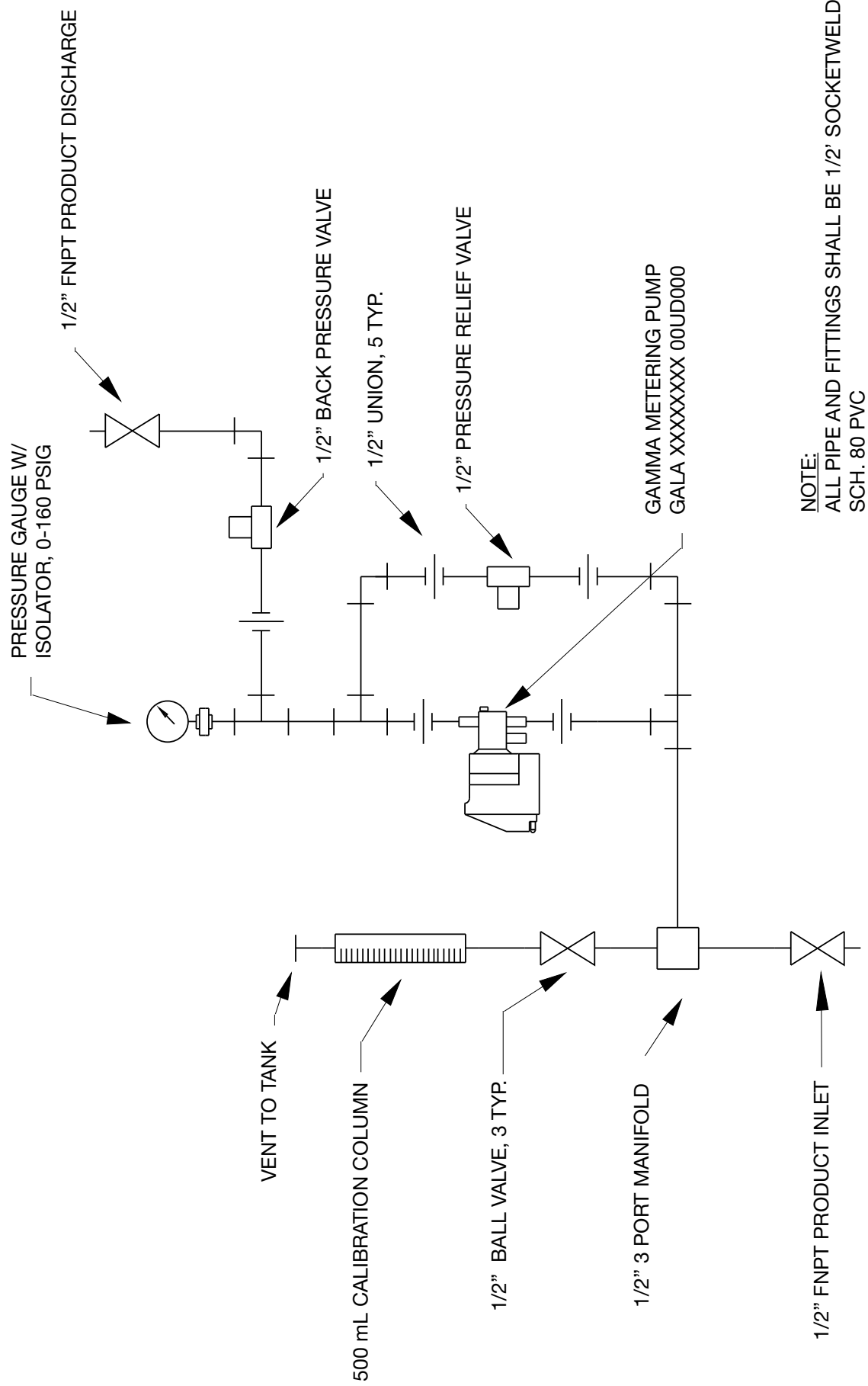
† Vented Balls for Sodium Hypochlorite use.
Specifications and prices are subject to change without notice.
Contact your ProMinent representative for the latest information.

Single Metering Pump Dosing Package (to 20 gph, 75 L/h)

**S1
Series**



S1 TYPICAL PIPING SCHEMATIC

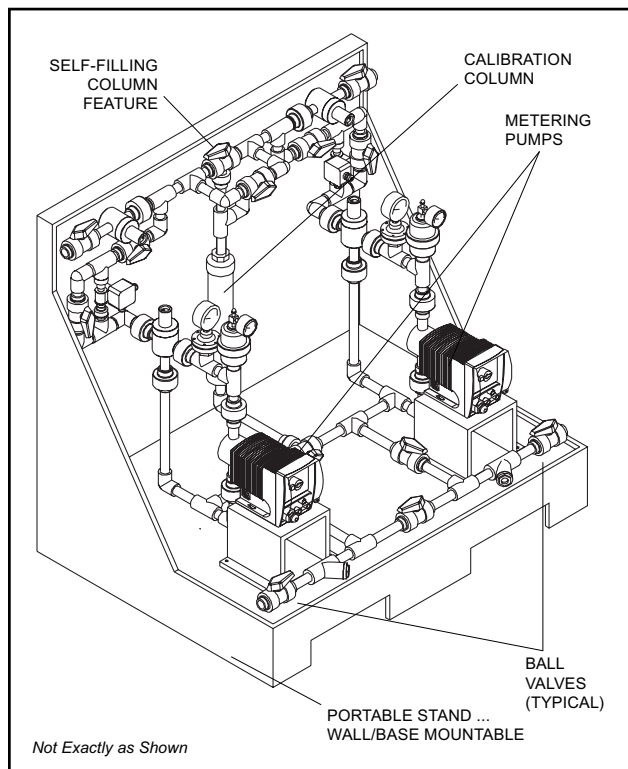


NOTE:
ALL PIPE AND FITTINGS SHALL BE 1/2" SOCKETWELD
SCH. 80 PVC

Dual Metering Pump Dosing Package (to 20 gph, 75 L/h)

S2 Series

FEATURES



- Portable, with simple pump hook-up, this self-contained package with integrated calibration column is ideal for chemical trials and for permanent or emergency chemical injection.
- Dual chemical metering pumps offer exceptional convenience and reliable backup minimizes costly downtime.
- Provided with convenient dual isolated suction and discharge terminations.
- Suitable for ProMinent beta, gamma, and Vario 1/2" chemical metering pumps with a maximum capacity of up to 20 gph (75 L/h) each.
- Polished Stainless Steel (SS), or UV protected Polypropylene (PP) and Polyethylene (PE) stands provide superior chemical resistance and durability.
- Available with 150# 316 SS or Schedule 80 PVC, PVDF or CPVC piping materials.

DESIGN SPECIFICATIONS

The system shall be a corrosion-resistant, completely self-contained package with dual chemical metering pumps, and all necessary piping, appurtenances and fittings assembled and tested by the chemical metering pump manufacturer. The chemical metering pumps, all piping, fittings and accessories shall be mounted to a stainless steel, PP or PE stand, predrilled for convenient base mounting. The unit must be portable. The chemical metering pump shall be microprocessor-controlled, positive displacement and diaphragm-type. ProMinent beta, gamma or Vario 1/2" metering pumps will be used as required.

Piping Materials: 316 SS, PVC, PVDF or CPVC

Connections:	Suction Inlet - 1/2" FNPT	Discharge Outlet - Refer to Pump Specifications in PFC Catalog
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Dimensions:	PP: 37" H x 40" W x 28 1/4" D	94 cm H x 102 cm W x 72 cm D
	SS: 32" H x 28" W x 20" D	81 cm H x 71 cm W x 51 cm D

Technology that sets new standards... Worldwide!

S2 PACKAGE CONFIGURATION

S2	0	0	0	0	0	0	0	0	0	0	0	0
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Series: Dual Pump Package (for beta, vario 1/2", and gamma Chemical Metering Pumps)

Stand Assembly Type

1	SS Stand (32"x28"x20")
2	PP or PE, UV Protected, black (37"x40"x28.25")
S	Special Order

Self Filling Calibration Option

	Valve	Seat/Seal	Piping
0	None	None	None
1	PVC	EPDM	PVC
2	PVC	Viton®	PVC
3	SS	PTFE	SS
4	PVDF	Viton®	PVDF
7	CPVC	Viton®	CPVC
S	Special Order		

†† Backpressure Valve

0	None
1	PVC
2	SS
3	PVDF
5	CPVC
S	Special Order

Ball Valve & Piping Assembly Type

	Valve	Seat/Seal	Piping	Connection
0	None	None	None	None
1	PVC	EPDM	PVC	Socket weld
3	PVC	Viton®	PVC	Socket weld
5	SS	PTFE	SS	Threaded
6	PVDF	Viton®	PVDF	Fusion weld
9	CPVC	Viton®	CPVC	Socket weld
S	Special Order			

†† Pressure Relief Valve

0	None
1	PVC
2	SS
3	PVDF
5	CPVC
S	Special Order

†† Pressure Gauge**

0	None
1	2" SS w/PVDF isolator
2	2" SS w/PVC isolator
3	2" SS w/SS isolator
5	2" SS gauge only (w/o isolator)
6	2" SS w/CPVC isolator
S	Special Order

Calibration Column

0	None
1	100 mL PVC
2	500 mL PVC
5	100 mL PVDF/Glass
6	500 mL PVDF/Glass
7	100 mL SS/Glass
8	500 mL SS/Glass
S	Special Order

Y-Type Sediment Strainer

0	None
1	PVC
2	SS
4	CPVC
S	Special Order

†† Multi-Function Valve

0	None
1	Size I, PVDF, 145 psig (10 bar)
2	Size I, PVDF, 232 psig (16 bar)
3	Size II, PVDF, 87 psig (6 bar)
4	Size II, PVDF, 145 psig (10 bar)
5	Size III, PVDF, 145 psig (10 bar)
S	Special Order

†† Pulsation Dampener

		mL	cu.in.
0	None		
1	PVC/Viton®	164	10
2	SS/PTFE	131	8
3	PVDF/PTFE	131	8
4	PP/EPDM	164	10
5	PVC/HYPALON®	164	10
S	Special Order		

†† Flow Monitor

0	None
1	Type I, PVC
2	Type II, PVC
3	Type III, PVC
4	Type III, PVC w/bypass Assy.
5	Type I, PP
6	Type II, PP
7	Type III, PP
8	Type III, PP w/bypass Assy.
9	SS flow sensor w/ flow monitor
S	Special Order

S	2										
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PACKAGE	PUMP	TOTAL
\$	+	=
\$	\$	\$

MATERIALS SPECIFICATIONS

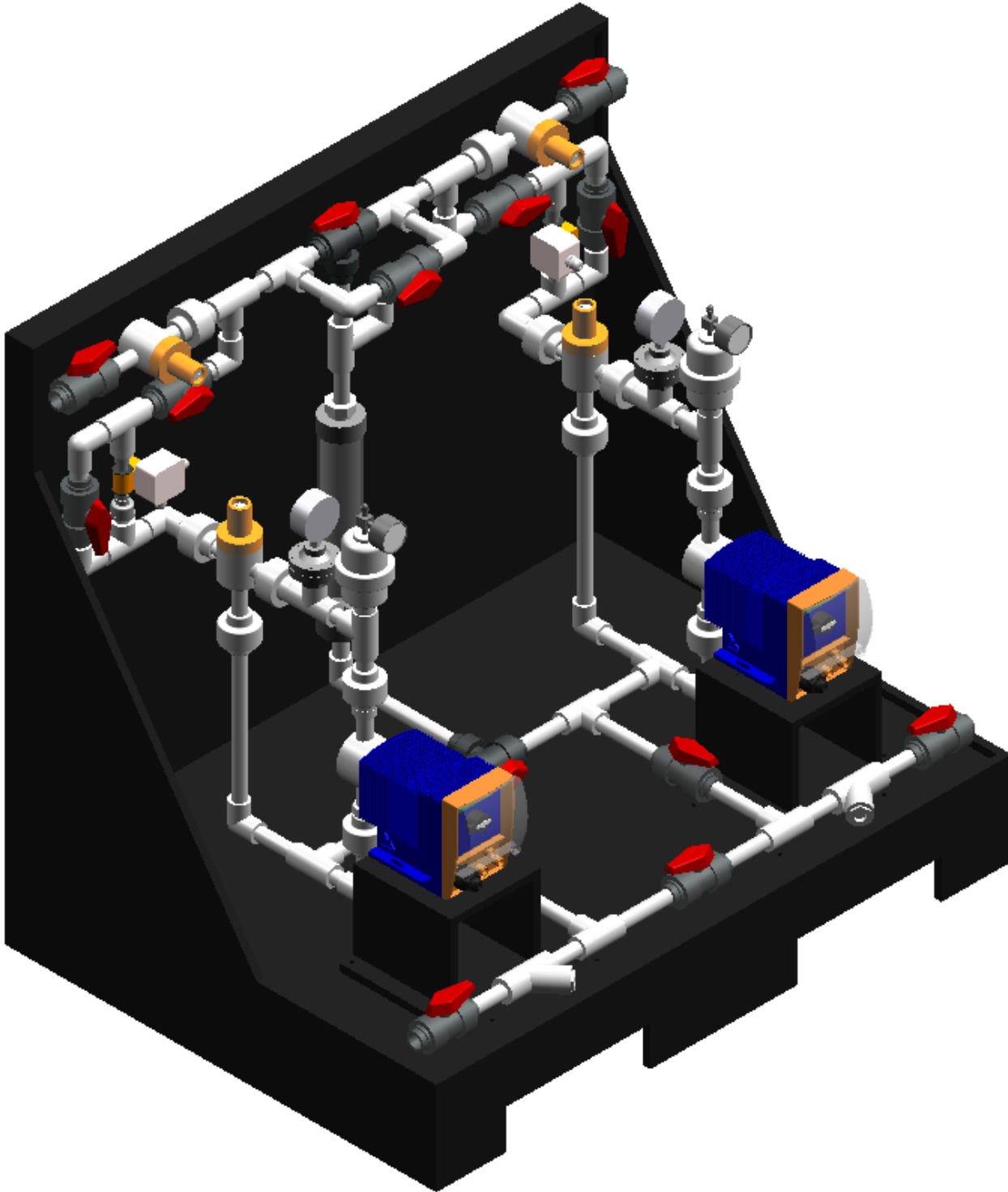
1/2" Ball Valves, PVC	True union design, socketweld PVC. EPDM or Viton® seals.
1/2" Ball Valves, SS	Threaded 316 SS. PTFE seals.
1/2" Ball Valves, PVDF	True union design, fusion weld PVDF, Viton® seals.
1/2" Ball Valves, CPVC	True union design, socket weld CPVC, Viton® seals, vented balls†.
Calibration Columns, PVC	100 mL, 2 mL grad., 1/2" FNPT 500 mL, 5 mL grad., 3/4" FNPT
Calibration Columns, SS	100 mL, 2 mL grad., 1/2" FNPT 500 mL, 5 mL grad., 3/4" FNPT
Calibration Columns, PVDF/glass	100 mL, 2 mL grad., 1/2" FNPT 500 mL, 5 mL grad., 3/4" FNPT

L-shaped Stands, SS	304 SS, 12 gauge, #4 finish 304 SS, 14 gauge, #4 finish pump riser
L-shaped Stands PP or PE	Polypropylene or Polyethylene, UV protected, black
1/2" Pipe and Fittings, PVC	Socketweld and/or threaded, Schedule 80
1/2" Pipe and Fittings, SS	Schedule 40 or 150# 316
1/2" Pipe and Fittings, PVDF	Fusion weld, Schedule 80
1/2" Pipe and Fittings, CPVC	Socket weld, Schedule 80

† Vented Balls for Sodium Hypochlorite use.
Specifications and prices are subject to change without notice.
Contact your ProMinent representative for the latest information.

Dual Metering Pump Dosing Package (to 20 gph, 75 L/h)

S2
Series



S2 TYPICAL PIPING SCHEMATIC

