

## CHEM-FEED® CFPS

Single, Duplex & Triplex pump systems

Chemically resistant polyethylene structure

Leak free, threadless connections

Built-in spill containment

Ships fully assembled



### Applications:

- Chemical metering
- Chlorination
- Fluoridation
- Potassium Permanganate
- Alum
- Sodium Bisulfite / Bisulfate
- Polymers
- Caustics
- Flocculants

### Chem-Feed Skid System Features:

**Chem-Feed Engineered Skid Systems** were designed for simple piping installation and easy component maintenance. Each factory built and tested system includes the following standard components:

**Pressure Relief Valve** - Protects the system from over-pressurization, 10-150 psi setting range, 150 psi maximum system pressure.

**Check Valve** - Protects the user from back-flow during pump maintenance.

**Flow Indicator** - Provides a visual indication of chemical movement through the system.

**Inlet Y Strainer** - Recommended for Diaphragm Pump systems.

**The following optional components are available for specification (see product matrix):**

**Calibration Cylinder** - Confirm pump output under system conditions. Specify cylinder volumes from 1.6 GPH to 64 GPH.

**Pulsation Dampener** - Protect the system components from pulsation. Recommended for diaphragm pump systems.

**Pressure Gauge with Guard** - Isolate and protect the system pressure gauge. Specify pressure ranges from 0-30 psi, 0-100psi, or 0-200 psi.

**MS-6 Chemical Flowmeter**- Provides 4-20mA and pulse output data to SCADA and to the pump to verify chemical feed - see MS-6 data sheet for more details.

**Terminal Box:** Pumps pre-wired for easy access to all electrical signal wires.

**Electrical Outlet Box:** Designed for use in wet, damp, or dry locations.

**Specifications:****Skid**

Chemically resistant polyethylene structure.

**Pump** (sold separately)

Flex-Pro model M-2, M-3 or M-4 peristaltic pump  
Chem-Pro model MC-2, MC-3 or MD-3 diaphragm pumps.

**Piping**

Single Skid: 1/2" PVC Schedule 80 (optional CPVC).  
Duplex Skid: 1" Inlet & 1/2" Outlet PVC Schedule 80 (optional CPVC).  
Triplex Skid: 1" Inlet & 1/2" Outlet PVC Schedule 80 (optional CPVC).

**Seals**

FKM seals (optional EPDM).

**Tubing (T)**

Reinforced braided PVC, 200 psi max, NSF listed. The pump inlet and outlet flexible tubing connections are terminated to half unions and secured to the barbed fitting with stainless steel clamps.

**Tubing clamps**

300 series SS band, 400 series SS screw

**Unions (U)**

PVC body, schedule 80

**Ball valves (V)**

True unions, PVC body, PTFE seats

**Pressure Relief Valve (PRV)**

PVC body, PTFE primary diaphragm seal. Non-wetted components: EPDM secondary seal, zinc plated steel spring, stainless steel external hardware, HDPE pressure adjustment screw. Infinite adjustment from 10-150 psi.

**Calibration Cylinder (CC)**

PVC body, PVC end caps, 1/2" PVC pipe outlet vent.  
Available volumes: 1.6 GPH (100ml), 4 GPH (250ml), 8 GPH (500ml), 16 GPH (1000ml), 32 GPH (2000ml), and 64 GPH (4000mL).

**Pulsation Dampener (PD)**

CPVC body, 10 cubic inch volume

**Gauge w/guard (G)**

Gauge: liquid filled stainless steel with blowout plug, bottom mount, 1/4" NPT threads. Available pressure ranges: 0-30 psi, 0-100, psi, 0-200 psi.  
Guard: PVC body, temperature compensated oil filled.

**Check Valve (CV)**

PVC body. Cracking pressure: 1.0-1.5 psi. Maximum working pressure: inlet = 150 psi, back = 100 psi.

**Flow Indicator (F)**

Machined cast acrylic, PVC connections, ceramic ball, PVDF ball stop, PVC half unions.

**Y Strainer (S)**

PVC body, 1/32" Mesh

**Universal mounting blocks**

PA 12

**Pump extended mounting brackets**

316 Stainless Steel

**Skid mounting foot pads**

316 Stainless Steel

**Mounting hardware**

18-8 Stainless Steel

Single Pump System

- Wall or Floor mounting acceptable

Duplex Pump System

- Wall or Floor mounting acceptable

Triplex Pump System

- Floor mounting only acceptable

**Maximum working pressure**

150 psig (10.3 bar)

**Operating Temperature**

14°F to 115°F (-10°C to 46°C)

**Approximate Shipping Weight**

Single Pump System

- Standard: 80 lb. (36 Kg)

- With Mounted Pump: 140 lb. (64 Kg)

Duplex Pump System

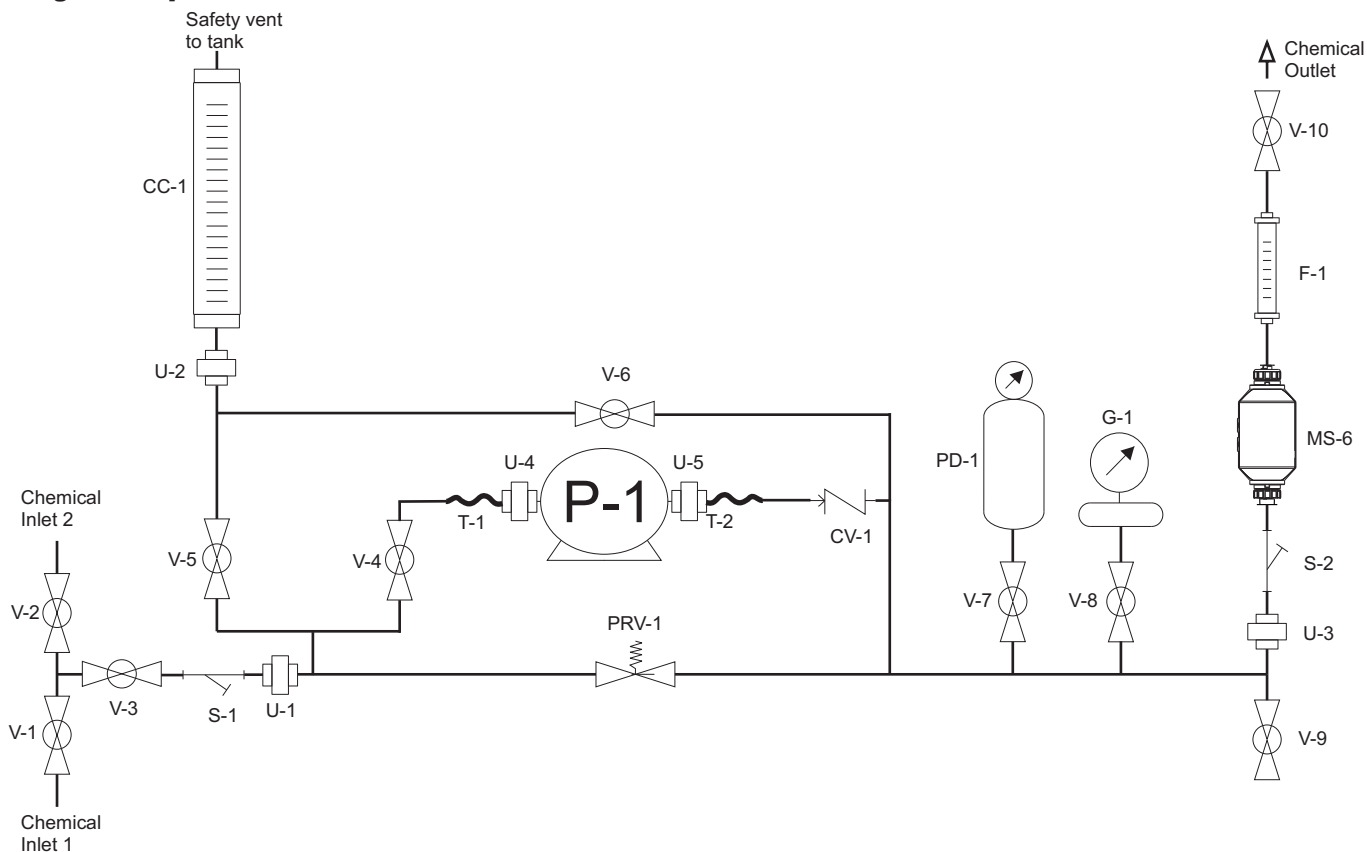
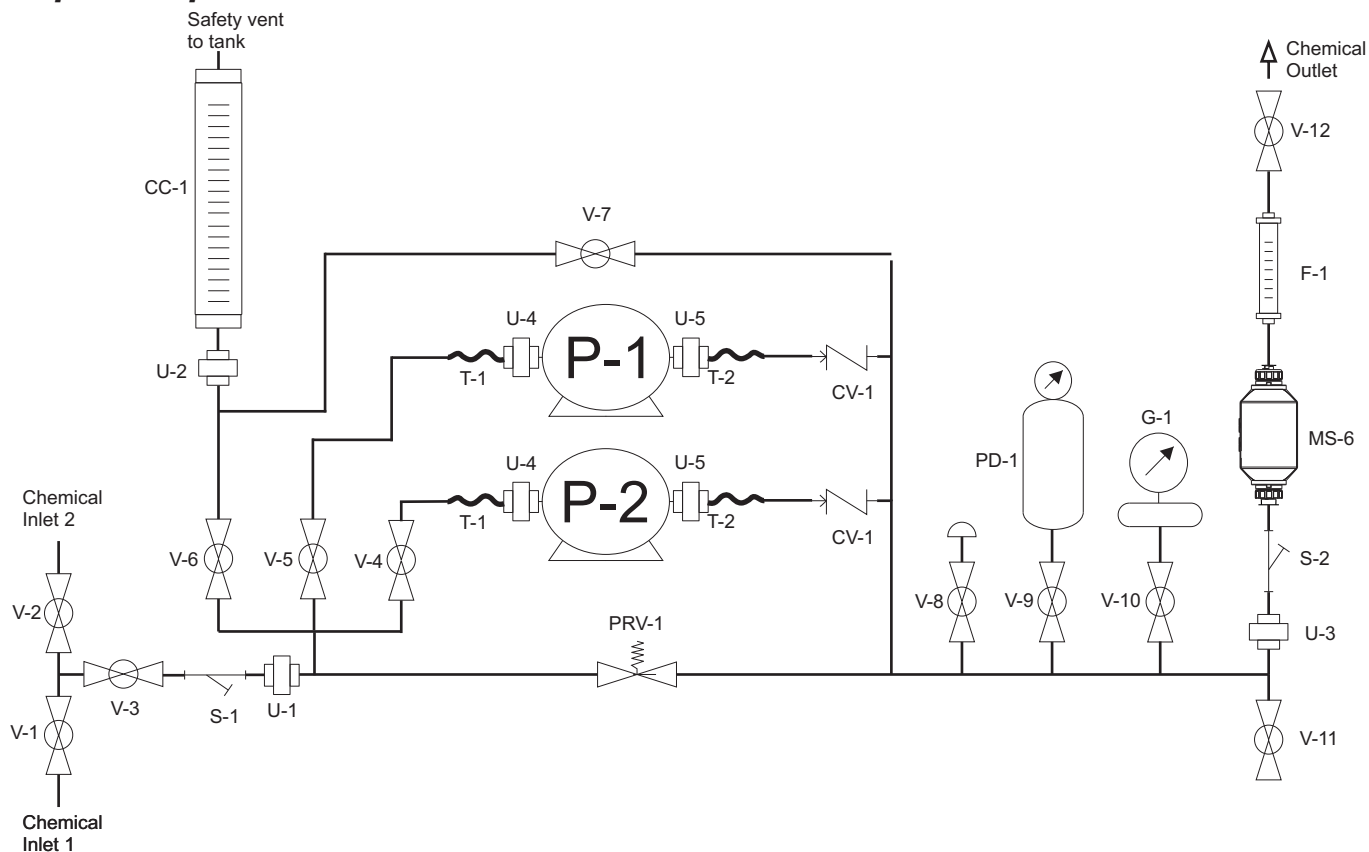
- Standard: 120 lb. (54 Kg)

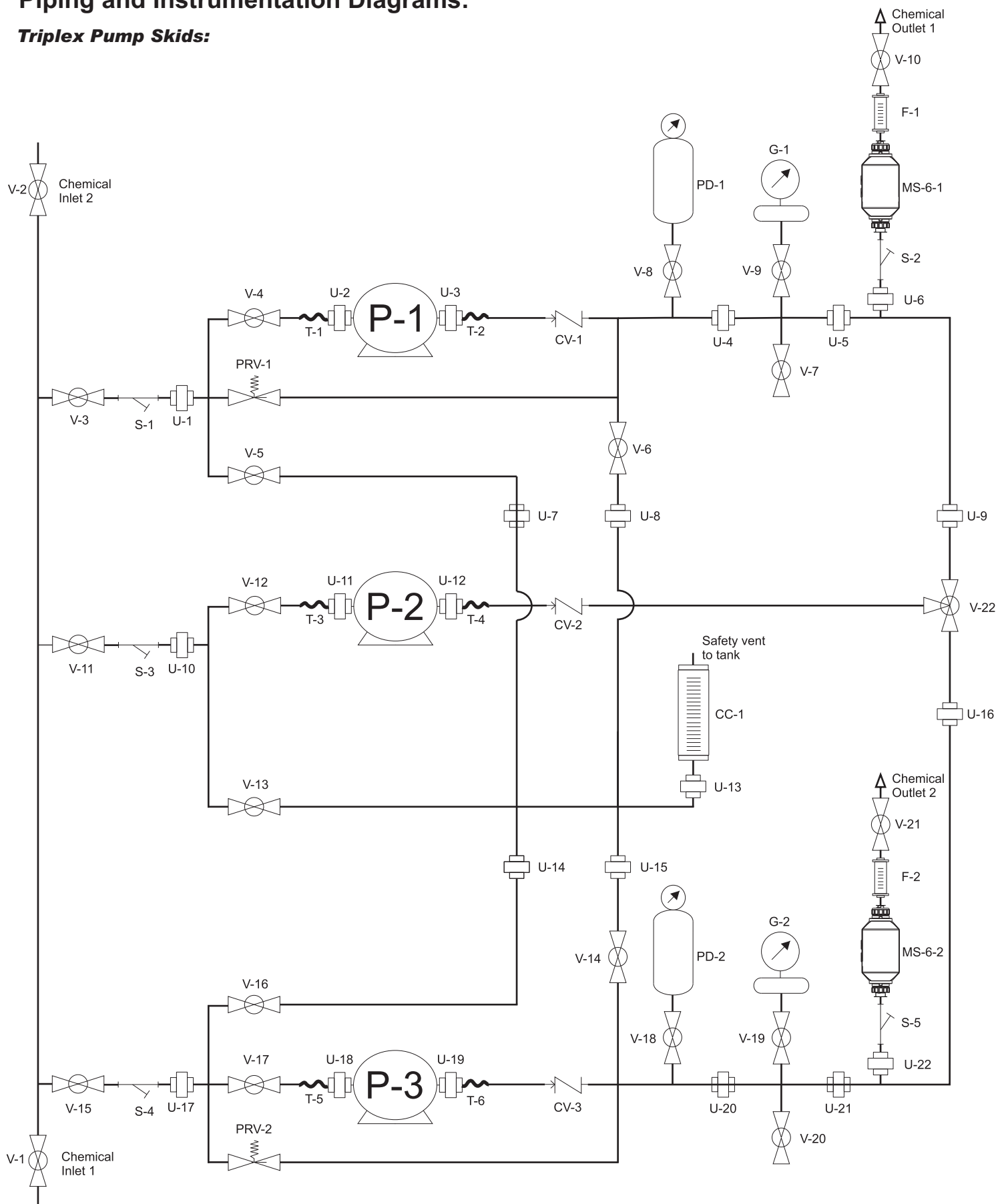
- With Mounted Pumps: 240 lbs (109 Kg)

Triplex Pump System

- Standard: 200 lb. (91 Kg)

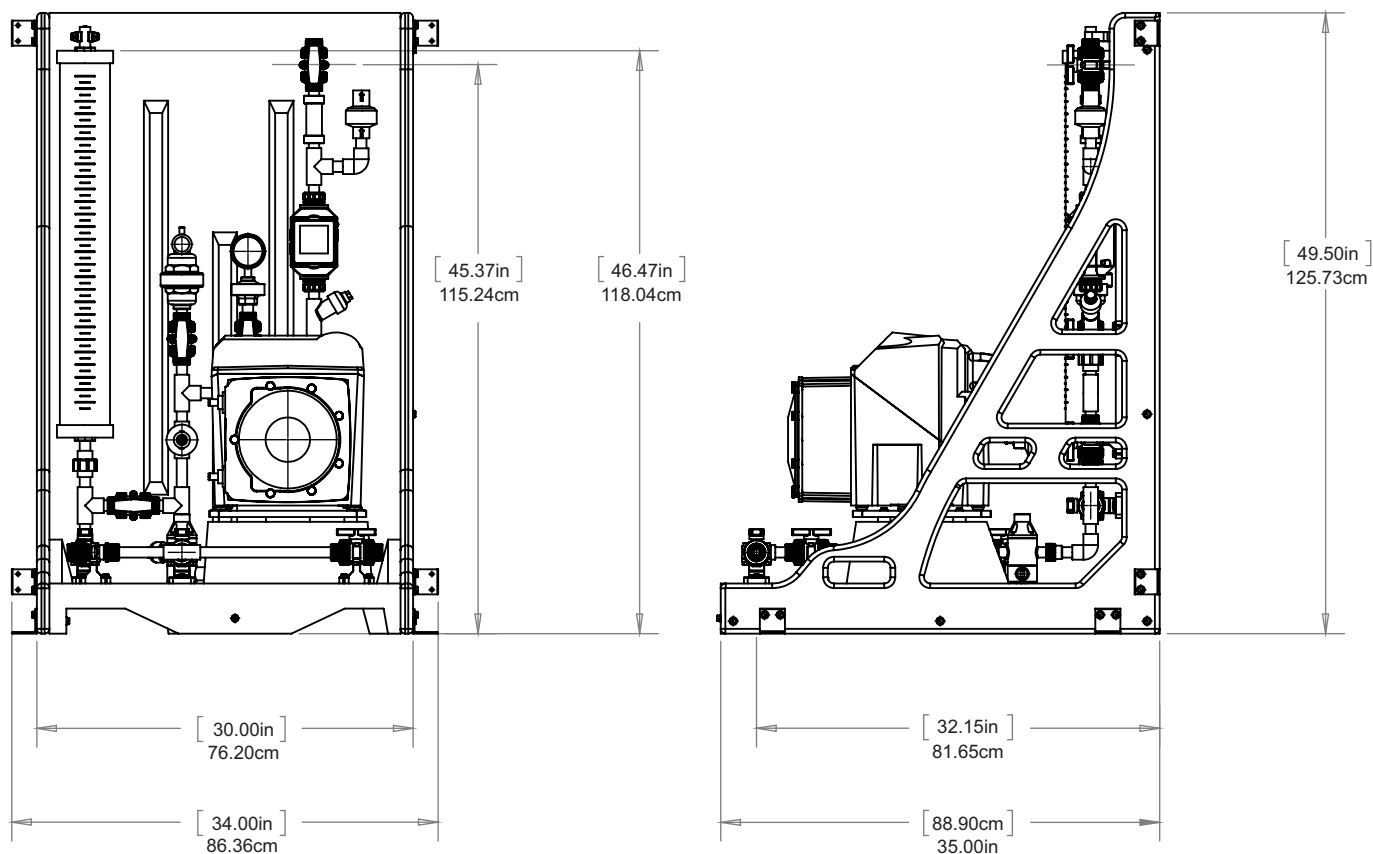
- With Mounted Pumps: 380 lbs (172 Kg)

**Piping and Instrumentation Diagrams:****Single Pump Skids:****Duplex Pump Skids:**

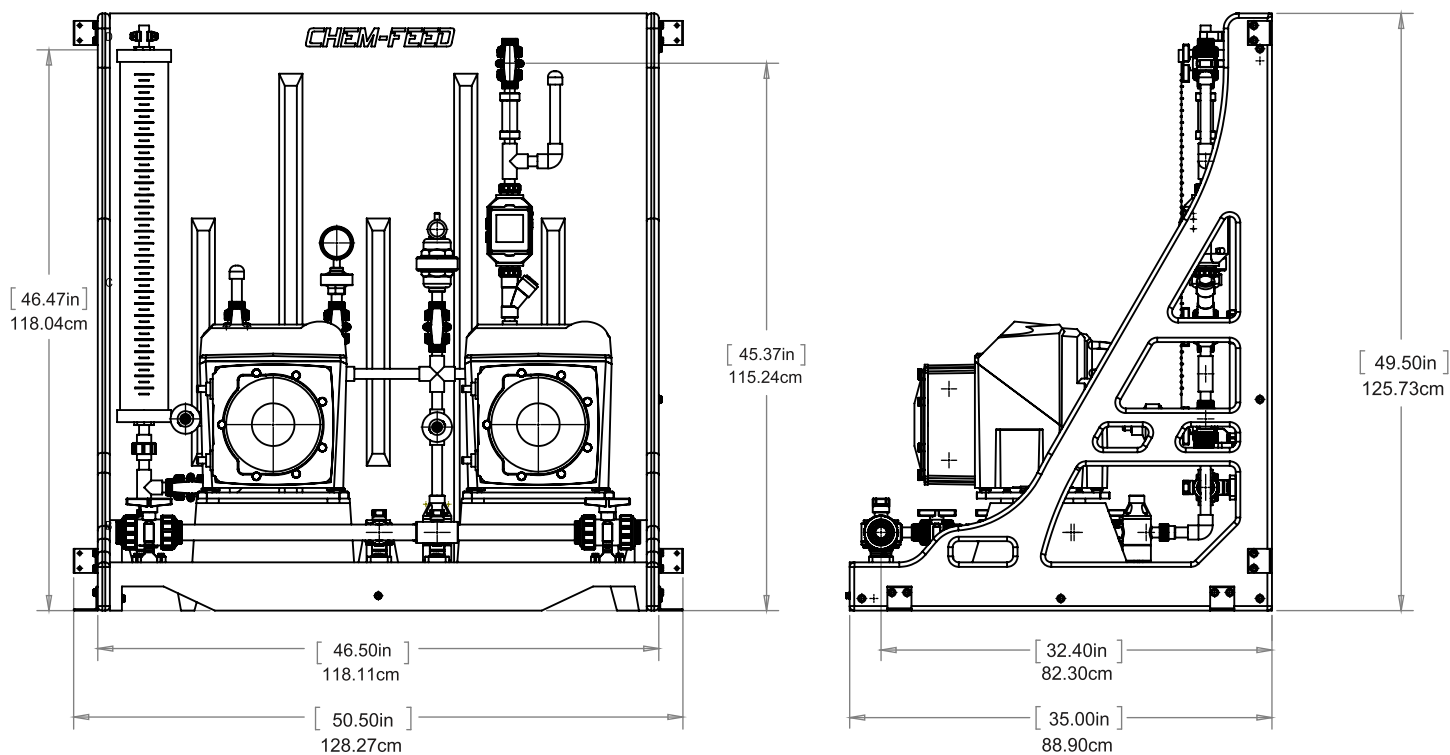
**Piping and Instrumentation Diagrams:****Triplex Pump Skids:**

**Dimensions:**

**Single Pump System:**

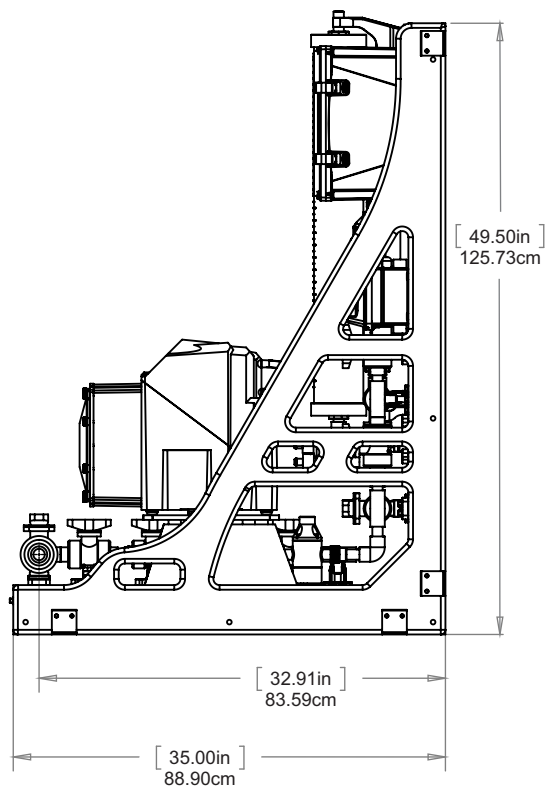
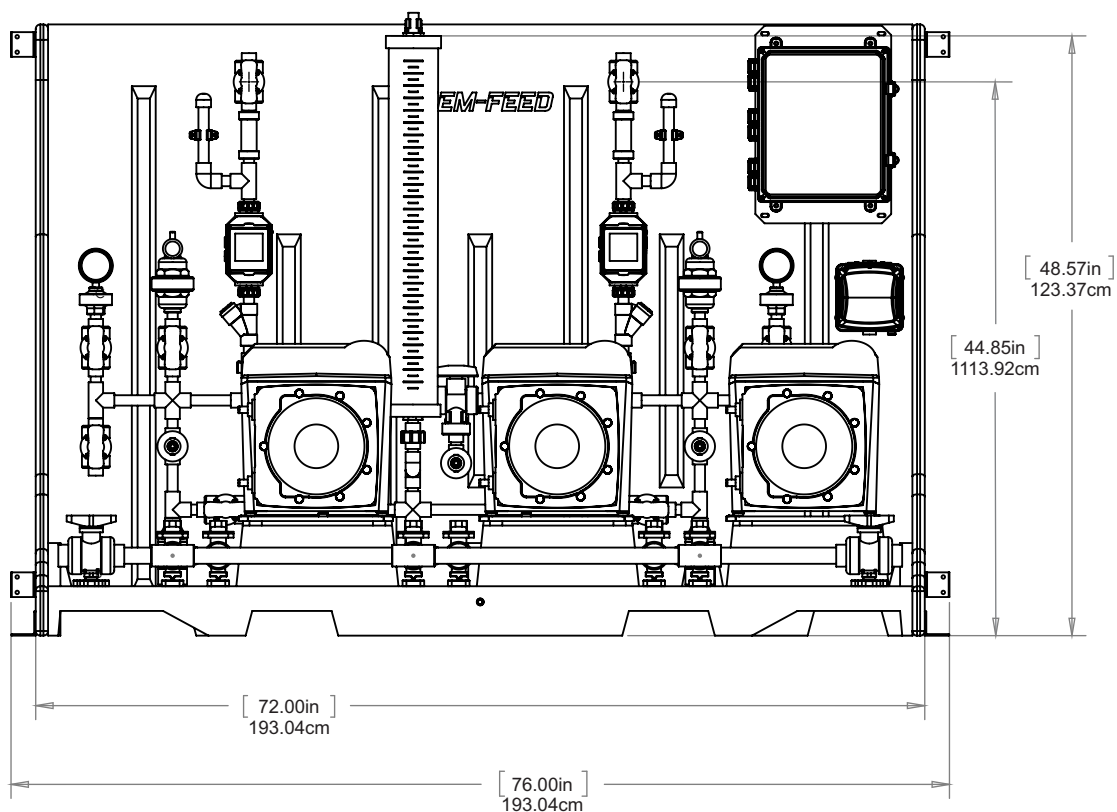


**Duplex Pump System:**



**Dimensions:**

**Triplex Pump System:**





### Chem-Feed® Engineered Plastic Skid System Matrix

#### System type

**CFPS-1** Single pump system - single chemical / single outlet, PE structure

**CFPS-2** Duplex pump system - single chemical / single outlet, PE structure

**CFPS-3** Triplex pump system - single chemical / dual outlet, PE structure

#### Piping / Valves / Unions / Seal Materials

**A** PVC piping, 1/2" OD PVC braided tubing connections

**B** CPVC piping, 1/2" OD PVC braided tubing connections

**C** PVC piping, 1/4" ID Polyethylene tubing connections

**D** CPVC piping, 1/4" ID Polyethylene tubing connections

**X** Skid Frame only without piping

#### Seal Material

**V** FKM

**E** EPDM

Calibration Cylinder	PVC	Glass
<b>A</b> 64 GPH (4000 ml)	<b>A</b>	
<b>B</b> 32 GPH (2000 ml)	<b>B</b>	
<b>C</b> 16 GPH (1000 ml)	<b>C</b>	<b>P</b>
<b>D</b> 8 GPH (500 ml)	<b>D</b>	<b>Q</b>
<b>E</b> 4 GPH (250 ml)	<b>E</b>	<b>R</b>
<b>F</b> 1.6 GPH (100 ml)	<b>F</b>	<b>S</b>

**X** None

#### Pulsation Dampener

**A** 10 cubic inch, CPVC body, PTFE diaphragm

**X** None

#### Pressure Gauge w/Guard

**A** 200 PSI gauge with guard, PTFE diaphragm

**B** 100 PSI gauge with guard, PTFE diaphragm

**C** 30 PSI gauge with guard, PTFE diaphragm

**X** None

#### Flowmeter and Strainer

**G** Model MS-612 Chemical Feed Flowmeter, 10-5,000 ml/min (0.158 - 79.2 GPH)

**H** Model MS-622 Chemical Feed Flowmeter, 100-10,000 ml/min (1.58 - 158 GPH)

**X** Inlet Strainer only

#### Miscellaneous Options - (leave blank if not specified)

<b>1</b>	Install with and ship with a specific pump model
<b>2</b>	Perform pressure and fluid testing with a specific pump model
<b>3</b>	Perform pressure, fluid testing, and ship with pump model installed
<b>5</b>	1/2" Intake manifold plumbing (Available on dual pump system only)
<b>A</b>	Isolation ball shut-off valves at check valves
<b>T1</b>	PTFE Tubing for Single Skid
<b>T2</b>	PTFE Tubing for Duplex Skid
<b>T3</b>	PTFE Tubing for Triplex Skid
<b>C1</b>	Terminal box and electrical outlet box (single skid only)
<b>C2</b>	Terminal box and electrical outlet box (duplex skid only)
<b>C3</b>	Terminal box and electrical outlet box (triplex skid only)

**Note:** When ordering pumps for skids, pump head orientation is standard LEFT facing only.

**CFPS-1** **A** **V** **-** **A** **A** **A** **X** **-** **3** Sample Chem-Feed Engineered Skid System Part Number