



**BURT** | **PROCESS**  
**EQUIPMENT.**

Partners In Global Water Quality

# CHEMPLUS

Chemical Metering Systems



Reliable, Compact Systems with Complete Flexibility in Customization



# CHEMPLUS

## Chemical Metering Systems

### ChemPlus Chemical Metering Systems

The Burt Process ChemPlus has revolutionized the concept of chemical dosing systems by providing a fully engineered, pre-packaged, corrosion resistant system that provides complete flexibility in customization. ChemPlus gives engineers and systems designers the ultimate in flexibility with the latest advances and widest range of proven technologies. Burt Process draws on over 50 years of experience in specifying and manufacturing chemical processing equipment to provide a feed system design that meets the most rigorous chemical metering demands.



ChemPLUS pre-engineered systems offer a wide range of component options, pump selection and piping arrangements needed to customize chemical metering system solutions.

- Wide range of pump technologies include:
  - Solenoid or Motor Driven Diaphragm Pumps
  - Gear, Peristaltic, Progressing Cavity & more
- Rugged Acid, Caustic & Solvent Resistant Construction
- Complete System Fabrication, Assembly & Test
- Skid & Containment Basin constructed of 1/2" HDPE, Wall or Floor mountable
- Simplex, Duplex, Triplex or Custom Designs
- Piping materials in PP, PVC, CPVC, PVDF, or SS
- Standard & Custom Control Options Available



ChemPlus Simplex System

### Fully Customizable Pre-Packaged Skids

### Applications

**Municipal Water:** Disinfection, Sodium Hypochlorite, pH Adjustment, Fluoride, Coagulation & Flocculation

**Municipal Wastewater:** Fume Scrubbers, pH Adjustment, Odor Control, Residual Disinfectant Management

**Food & Beverage:** Clean-In-Place, Clean-off-Line, Sterilizer Water Treatment

**Institutional:** Cooling Tower Waste Treatment, Boiler Water Treatment, Closed Loop Systems

**Other Applications:** in Swimming Pools & Water Parks, Mining & Agriculture, Utilities & Dairy Industry, Pulp & Paper, Oil & Gas



ChemPlus Duplex System



ChemPlus Triplex System



### Standard System Configurations

Simplex w/selectable components

Duplex arrangements include:

- Redundant suction & discharge
- Redundant discharge only
- Lead/Backup, single pipe system

Triplex arrangements include:

- Redundant suction & discharge
- Redundant discharge only

### Documented Factory Testing

- ✓ 120-Minute Hydrostatic Pressure Test
- ✓ Pressure Relief Valve Preset & Tested
- ✓ Back Pressure Valve Preset & Tested
- ✓ Pulsation Dampener Charged & Tested
- ✓ Completed Pre-Shipment Check List
- ✓ Documented Inspection Report

**BURT PROCESS EQUIPMENT**  
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Tel: 281.281.4200 Fax: 281.281.4201

**Hydrostatic Procedure/Test & Device Setting Report**

Customer/Job: \_\_\_\_\_  
BPE Order: 1129914  
Equipment: 1 Skid, s/n: 1129914A  
Test Date: 7-10-13

**Test Procedure:**

- After fabrication, assembly and cleaning, piping and components shall be pressurized to the test pressure shown below.
- The following method(s) shall be used:
  - Fill equipment with ambient temperature water as the hydraulic medium, vent all air, and pressurize per the chart below. Maintain this test for a minimum of 120 minutes while examining all joints for leaks. Verify and record the pressure at beginning & end of the test.
- This test shall be considered satisfactory when no leaks or drop in pressure is observed for a minimum of 120 minutes.

General Plumbing	Hydro Test Pressure	Actual Test Pressure
Suction & Discharge Piping-PVC	100 psi	_____ psi

Pressure Relief Valve	Pressure Relief Setting	Actual Relief Pressure
1/2" PVC, Adjustable	75 psi	_____ psi

Back Pressure Valve	Pressure Setting	Actual Back Pressure
1/2" PVC, Adjustable	25-30 psi	_____ psi

This is to certify that the above system pipe, fittings, hose, & components have passed hydrostatic testing per the procedure indicated and pressures recorded above.

Inspected By: \_\_\_\_\_

Pressure Gauge w/Guard  
2.5" or 4.5" from 0-160 PSI

Pipe Labeling  
Provided with chemical name & flow direction

Piping  
Schedule 80 PVC, CPVC or  
Fusion-Welded PVDF



ChemPlus Nameplate  
(Customized for OEMs)

Selectable Pump Options  
Pump options include Solenoid, Mechanical or Hydraulic Diaphragm, Gear, Peristaltic or Progressing Cavity

Back Pressure (anti-syphon) Valve  
Two port flow through design & field adjustable from 15-150 psi

Pulsation Dampener  
Removes 99% pulsation, sizes include 4, 10, 36 & 85 cubic inch

Pressure Relief Valve  
Two or three port flow through design available & field adjustable to 15-150 psi

Calibration Column  
Sized for either 30 or 60 second draw down & available in Clear PVC, PP or Glass

Manual Ball Valves  
True union design available vented or with lockout handles

Visual Flow Indication  
Excellent diagnostic tool, Rhythmic rising & falling of ball indicates positive flow

Single Piece 1/2" HDPE Corrosion Resistant Skid  
Wall or Floor mountable with containment basin & drain with valve



CHEMICAL FEED





**Chemical Feed System Model #:**

**BCPS**

**SKID CONFIGURATION**

A SIMPLEX  
B DUPLEX  
C DUPLEX DUAL OUTLET  
D TRIPLEX

**PUMP STYLE**

A AIR OPERATED DIAPHRAGM  
C PROGRESSING CAVITY  
D SOLENOID DRIVEN DIAPHRAGM  
E MOTOR DRIVEN DIAPHRAGM  
G GEAR  
H HYDRAULICALLY ACTUATED DIAPHRAGM  
L PERISTALTIC

**PUMP TUBING/DIAPHRAGM MATERIAL**

1 NORPRENE  
2 NORPRENE CHEMICAL  
3 TYGOTHANE  
4 VITON  
5 EPDM  
6 TEFLON  
7 POLYETHYLENE  
S SPECIAL

**SINGLE PUMP MAXIMUM FLOW (gph)  
GALLONS PER HOUR**

XXX

**PUMP POWER**

1 120VAC  
2 240VAC, SINGLE PHASE  
3 240VAC, THREE PHASE  
4 480VAC, THREE PHASE  
S SPECIAL

**PIPING/VALVE/COMPONENTS MATERIAL**

1 PVC/EPDM/TEFLON  
2 PVC/VITON/TEFLON  
4 CPVC/VITON/TEFLON  
5 PVDF/VITON/TEFLON  
6 PVC/VITON/TEFLON (Vented)  
7 CPVC/VITON/TEFLON (Vented)  
S SPECIAL

**PIPING & VALVE SIZE**

A 1/2" (20 mm)  
B 3/4" (25 mm)  
C 1" (32 mm)  
E 1-1/2" (50 mm)  
S SPECIAL

**\*STANDARD OPTIONS**  
LOCKING VALVES  
JUNCTION PANEL  
SPARE PARTS PACKAGE

**CUSTOMIZED FEATURES**

X NONE  
S STANDARD OPTIONS\*  
C CUSTOM OPTIONS  
SC STANDARD AND CUSTOM OPTIONS

**PRESSURE GAUGE/GUARD SIZE & RANGE**

1 0-30 PSI, 2 1/2" DRY, SS CASE  
2 0-60 PSI, 2 1/2" DRY, SS CASE  
3 0-100 PSI, 2 1/2" DRY, SS CASE  
4 0-160 PSI, 2 1/2" DRY, SS CASE  
5 0-30 PSI, 4-1/2" DRY, FULL 316SS CONSTRUCT  
6 0-60 PSI, 4-1/2" DRY, FULL 316SS CONSTRUCT  
7 0-100 PSI, 4-1/2" DRY, FULL 316SS CONSTRUCT  
8 0-160 PSI, 4-1/2" DRY, FULL 316SS CONSTRUCT  
S SPECIAL

**BACK PRESSURE VALVE/RANGE**

1 15-150 PSI, ADJUSTABLE  
S SPECIAL  
X NONE

**PRESSURE RELIEF VALVE RANGE**

1 5-75 PSI, ADJUSTABLE  
2 15-150 PSI, ADJUSTABLE  
S SPECIAL

**PULSATION DAMPENER**

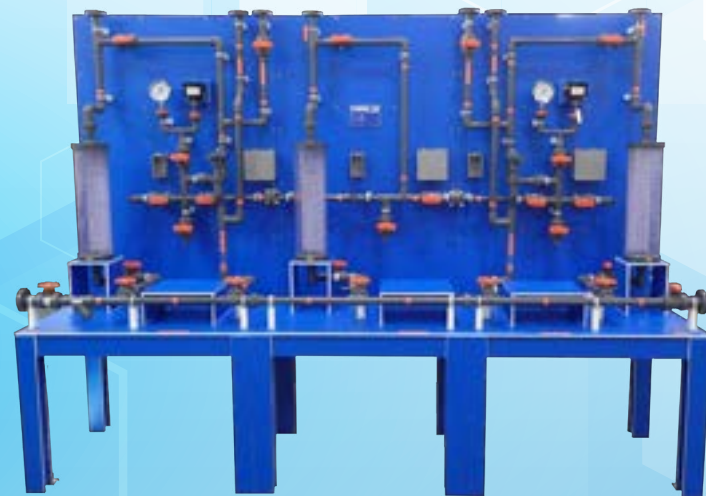
A 10 CUBIC INCH, THREADED  
B 36 CUBIC INCH, THREADED  
C 85 CUBIC INCH, THREADED  
S SPECIAL  
X NONE

**CALIBRATION CYLINDER/VOLUME**

A 1.6 GPH (100ml) CLEAR PVC  
B 4 GPH (250ml) CLEAR PVC  
C 8 GPH (500ml) CLEAR PVC  
D 16 GPH (1000ml) CLEAR PVC  
E 32 GPH (2000ml) CLEAR PVC  
F 64 GPH (4000ml) CLEAR PVC  
L 8 GPH (500ml) BOROSILICATE GLASS w/ ACRYLIC SHIELD  
M 16 GPH (1000ml) BOROSILICATE GLASS w/ ACRYLIC SHIELD  
S SPECIAL  
X NONE

**FLOW VERIFICATION SENSOR**

A DIGITAL PADDLEWHEEL, 30 - 300 ml/Min  
B DIGITAL PADDLEWHEEL, 100 - 1,000 ml/Min  
C DIGITAL PADDLEWHEEL, 200 - 2,000 ml/Min  
D DIGITAL PADDLEWHEEL, 500 - 5,000 ml/Min  
E DIGITAL PADDLEWHEEL, 700 - 7,000 ml/Min  
S SPECIAL  
X NONE



### System Options

- Flow or Pressure Verification Sensors
- Conduit Box for Power & Control Signals
- Splash Guard Covers
- ChemPlus Nameplate may be customized
- HDPE or FRP Outdoor Shelters
- Elevated Support Legs or Stand
- Custom Controls & Instrumentation

## Custom ChemPlus Systems

Choose from a variety of standard ChemPlus Systems, or the Burt Process team of highly qualified design engineers can develop a system to meet your specific application needs. All systems are assembled at our facility on fabricated skids with electrical connections and controls as required.



### Control Panels

Burt Process Equipment provides complete industrial control panel design and UL 508A fabrication services as part of our product offering. Burt Process control panels provide the highest quality in workmanship coupled with optimum control in standard and custom enclosures. Interface modules available for Modbus, GENIbus, BACnet, Profibus, PROFINET and GSM/GPRS [wireless communication]. All panels are UL 508A listed.

#### Control Panel Options

- UL Type 4X FRP or stainless steel enclosures for corrosive environments
- Microprocessor based controllers
- Explosion proof rated panels for hazardous environments
- PLC [Programmable Logic Controller] and HMI [Human Machine Interface]
- PC Interface and data acquisition systems





Send your specifications,  
we'll provide the solution.

Corporate  
Headquarters  
100 Overlook Drive  
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## Our Services

- System Engineering
- System Installation and Upgrades
- Programming Updates
- PLC and PC Controls Integration
- Start-up, Testing, Training
- Documentation
- Maintenance & Technical Support
- Preventive Maintenance Contracts and Agreements
- Instrumentation Calibration
- Pump Equipment Repair
- On-Site Equipment Evaluations

## Our Products

- pH Neutralization Systems
- High Purity Water Generation Equipment
- Rainwater Recovery Systems
- Chemical Feed Systems
- Pump Transfer Stations
- Wet Process Benches
- Metal Finishing Components and Systems
- Pumps
- Tanks and Mixers
- Process Instrumentation and Controls
- Plastic Valves, Fittings and Tubing



[www.BurtProcess.com](http://www.BurtProcess.com)