



## ChemTec II Automated Metering System

- intelligent bioprocessing system
- precise volumetric / gravimetric metering

The ChemTec II is the next generation high precision metering system that provides application specific automation for chemical and biological application.

The precision metering is achieved by using high resolution optical motor encoders for volumetric applications as well as connection to a balance for gravimetric applications. Applications range from programmable dispensing strategies, reactor biomass and pH maintenance, analog control, as well as solution weight maintenance or diafiltration control.

The automatic documentation and alarm / pump stop settings allow the user to focus on other tasks while the system is running. Programmable end points ensure the system ceases operation when interlock alarms or application target endpoints are reached. The ChemTec II is available with peristaltic heads. When sold with SciDoc software or a printer, documentation capabilities include 10 real-time filtration parameters.



*Currently available in North America only.*

## Features and Benefits

- Simplified HMI
- Resistive touch screen
- Easy pump & balance setup
- USB recipe import / export
- Mobile, carry by hand
- Stackable
- Integrated pressure and temperature
- Remote pump control

## Applications

### Metering

The ChemTec II provides user-definable feed either by volume or by weight. Volumes are calculated by a high resolution optical encoder or if connected to an electronic balance, the ChemTec II becomes a self-calibrating metering system. The feed rates are executed on a user-programmable time schedule.

Linear and exponential feed gradients can be implemented from the ChemTec II front panel or programs can be prepared, stored and transferred via a USB thumbdrive to additional ChemTec II pumps.

### Diafiltration

The ChemTec II will maintain weight of a Retentate (or other) vessel using a connected an electronic balance. This is done in a programmed manner with appropriate alarms. The process may be additive or subtractive.

### pH Control

The ChemTec II can provide control of pH Maintenance or End Point Titration in a programmed manner via connection to pH meter with 4-20 ma output. Appropriate alarms are available. Solution and/or Reagent weight may be monitored via electronic balances if provided.

## Specifications

|                         | Description                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power                   | 100-240 VAC, 50/60 hz, 3.15 A                                                                                                                                                                                                                                                                                                                                                   |
| Industry Specifications | REACH, ROHS, WEEE                                                                                                                                                                                                                                                                                                                                                               |
| Dimensions              | 9.5 in. (24.1 cm) W x 11.5 in. (29.2 cm) H x 13.4 in. (34 cm) D                                                                                                                                                                                                                                                                                                                 |
| Weight                  | 16.2 lbs / 7.43 kg                                                                                                                                                                                                                                                                                                                                                              |
| Pressure Sensor Range   | 0-60 psi                                                                                                                                                                                                                                                                                                                                                                        |
| I/O Ports               | SciPres II pressure sensors (3), SciTemp II temperature sensors (3), serial balance input (3), RS232 serial port (1) for SciDoc II data collection (USB adapter cable included), digital outputs (8) - 6 intended for remote pump control, 4 - 20 mA analog outputs (8) - for pump / drive or valve proportional control, 4 - 20 mA analog inputs (4) - 1 dedicated to pH input |

## Options and Accessories

### Pump Heads:

#### Tandem Peristaltic

- 080-108 (1081 head)  
Flow Rate (mL/min): 0.03 - 1515
- 080-1082 (1082 head)  
Flow Rate (mL/min): 0.5 - 2258  
(Pressure: 25 psi continuous - 45 psi max)



#### Masterflex Peristaltic

- 080-103-2 Easyload II thin wall  
Flow Rate (mL/min): 0.03 - 1515
- 080-103-4 Easyload II thick wall  
Flow Rate (mL/min): 0.5 - 2258  
(Pressure: 25 psi continuous - 45 psi max)



### Balance Accessories

- 100-VIPER6 BALANCE, 6 KG X 0.1 GM, ICS425  
080-072ICS Communication Cable



- 100-8201 BALANCE, OHAUS, AX8201, 8200X0.1G  
080-067PGS Communication Cable



## Ordering Information

| Part Number | Description   | Motor RPM | Pump Head   | Tubing Sizes                 | Flow Rates (mL / min) |
|-------------|---------------|-----------|-------------|------------------------------|-----------------------|
| CHEM2-11    | 8 RMP, 1081   | 8         | Tandem 1081 | #13, #14, #16, #25, #17, #18 | 0.03 - 24.3           |
| CHEM2-12    | 8 RMP, 1082   | 8         | Tandem 1082 | #15, #24, #35                | 0.5 - 20              |
| CHEM2-21    | 160 RPM, 1081 | 160       | Tandem 1081 | #13, #14, #16, #25, #17, #18 | 0.5 - 554             |
| CHEM2-22    | 160 RPM, 1082 | 160       | Tandem 1082 | #15, #24, #35                | 9.6 - 412             |
| CHEM2-31    | 600 RPM, 1081 | 600       | Tandem 1081 | #13, #14, #16, #25, #17, #18 | 2 - 1515              |
| CHEM2-32    | 600 RPM, 1082 | 600       | Tandem 1082 | #15, #24, #35                | 111 - 2258            |