This guide provides a quick reference on operating the Triumph SP12 Syringe Pump. Please refer to the Triumph SP12 Syringe Pump user manual at WWW.TRIUMPHMED.COM for detailed operation and settings.
• Install Pole/Cage Clamp on back of pump with provided hex wrench and bolt. Ability to install vertically or horizontally. (See Figure A and B)

• If attaching to cage it is necessary to install vertically with “split” side of clamp on the top. Also necessary to have clamp handle all the way out (see figure C)
- Press and Hold Power Button for 2 Seconds to Power on
- Select “Yes” or “No” to Clear last treatment. Selecting “Yes” will clear all infusion parameters from previous infusion. If no selection is made within 30 seconds all parameters are cleared automatically
- Pull out barrel clamp and rotate either direction. Squeeze Plunger Handle and slide out to the right.
- Install Syringe ensuring Syringe flange is inserted fully into flange holder, turn barrel clamp to secure syringe, engage plunger holder to Syringe plunger, and confirm correct Brand and Size
- Select Infusion Mode, Set Infusion Parameters, purge if necessary, and verify settings
- Press Start

### Basic Operation

<table>
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<th>Syringe Brand</th>
<th>VTBI (Volume To Be Infused)</th>
<th>Time for Infusion</th>
<th>Infusion Mode</th>
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<td>Syringe Size</td>
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During Infusion Interface

- Programmable Bolus
- Occlusion Pressure Indicator
- Syringe Brand/Alarm
- Current Infusion Rate
- Syringe Size
- Touchscreen Lock/Unlock
- Battery Indicator
- VTBI Volume to Be Infused
- Time Left for Infusion Completion
- Volume Infused
- Start/Stop Infusion
- Manual Bolus
- Settings
- AC Power Indicator
- Power Button
- Alarm Indicator
Infusion Modes

To Access Modes Press The Bottom of Home Screen or Select Menu then Modes

- **Rate Mode**: Set VTBI and Rate (ml/hr)
  VTBI Range: 0.01 - 9999.99 ml

- **Time Mode**: Set VTBI and Time
  VTBI Range: 0.01 - 9999.9 ml
  Time Range: 0 – 99 Hours 59 Mins

- **Body-Weight Mode**: Select Unit, Enter Body Weight, Concentration, Dose, VTBI
  Dose Rates: mcg/min, mcg/hr, mcg/kg/min, mcg/kg/hr, mg/min, mg/h, mg/kg/min, mg/kg/hr plus more available

- **Drug Library Mode**: Select Drug, Enter Concentration, Dose Rate, Weight
  Drug library is editable by going to settings – Drug Library – DrugLib maintenance – Enter Password 8888 - options to edit drugs and change password
Purge: While pump is idle Press Purge on screen and select Yes or Press and Hold the Purge Softkey. (see Figure 1)

Programmed Bolus: During infusion Press Bolus on screen and set Bolus VTBI, Bolus rate, Bolus time, and then select start (see Figure 2 and Figure 3)

Manual Bolus: During infusion press and hold Bolus softkey (see Figure 2) - Audible tone every 1 ml bolus infused

To change default Manual Bolus rate: while pump is idle go to Menu, Settings, then select Bolus rate. (see Figure 4)
To Enter additional Settings Select the Menu button on Touchscreen or Softkey while pump is idle

- **Modes**: Change current Infusion Mode
- **Settings**: Change current Syringe Brand, drug library, default KVO Rate (0.01 ml/hr – 5.0 ml/hr), default Manual Bolus rate, Occlusion Pressure (3 Levels 300 mmhg – 900 mmhg), Pump idle alert time, Almost empty alarm, Micro Mode.
- **General**: Change Date & Time, Screen Brightness, Sound Level, Screen Lock time, Night Mode, and Battery Capacity Indicator
- **Records**: Recall History of alarms, and recent therapies
- **System**: Change Language, Factory default, Version, and Maintenance
- **Home**: Go back to Home screen
- **Standby Mode**: To Access Standby Mode press Power button, select Standby and enter standby time