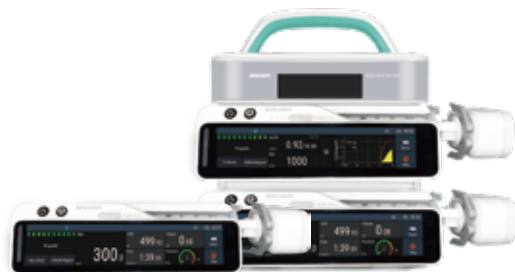


# BioFusion P300 Series

## P300/P300 Neo/P300 Ex/P300 Pro

### Syringe Pump



#### Physical Specifications (P300/P300 Neo/P300 Ex/P300 Pro)

|                    |                                                                          |
|--------------------|--------------------------------------------------------------------------|
| Size               | 265mm×160mm×75mm (L×W×H)                                                 |
| Weight             | ≤1.90kg                                                                  |
| Screen             | 6.9 inch Color TFT LCD capacitive touchscreen                            |
| Resolution         | 280×1424 pixels                                                          |
| Brightness         | 1-10 levels adjustable                                                   |
| Display            | Patient information, Alarm information<br>Infusion status, system status |
| Ingress protection | IP33                                                                     |

#### Parameters Specifications

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Accuracy                                      | Mechanical accuracy $\leq \pm 0.5\%$<br>Infusion rate accuracy:<br>0.01ml/h $\leq$ rate $\leq$ 0.10ml/h: $\leq \pm 5\%$<br>0.10ml/h $\leq$ rate $\leq$ 2350ml/h: $\leq \pm 2\%$ or<br>$\pm 0.005$ ml/h, whichever is greater<br>Bolus volume accuracy: $\leq \pm 2\%$ , or $\pm 0.05$ ml,<br>whichever is the greater<br>KVO rate accuracy:<br>0.01ml/h $\leq$ rate $\leq$ 0.10ml/h: $\leq \pm 5\%$<br>0.10ml/h $\leq$ rate $\leq$ 5.0ml/h: $\leq \pm 2\%$ or<br>$\pm 0.005$ ml/h, whichever is greater |  |
| Range of Infusion rate (Bols rate)            | 1ml syringe (0.01~50.00)ml/h<br>2ml / 3ml syringe (0.10~150.0)ml/h<br>5ml syringe (0.10~300.0)ml/h<br>10ml syringe (0.10~800.0)ml/h<br>20ml syringe (0.10~1200)ml/h<br>30ml syringe (0.10~1500)ml/h<br>50ml / 60ml syringe (0.10~2350)ml/h<br>Resolution:<br>(0.01~99.99)ml/h increment 0.01ml/h<br>(100.0~999.9)ml/h increment 0.1ml/h<br>(1000~2350)ml/h increment 1ml/h                                                                                                                              |  |
| Range of bolus volume                         | 1ml syringe (0.01~1.00)ml/h<br>2ml syringe (0.10~2.00)ml/h<br>3ml syringe (0.10~3.00)ml/h<br>5ml syringe (0.10~5.00)ml/h<br>10ml syringe (0.10~10.00)ml/h<br>20ml syringe (0.10~20.00)ml/h<br>30ml syringe (0.10~30.00)ml/h<br>50ml syringe (0.10~50.00)ml/h<br>60ml syringe (0.10~60.00)ml/h                                                                                                                                                                                                           |  |
| Occlusion detection                           | For the 10ml, 20ml, 30ml, 50ml, 60ml syringes:<br>15 levels selectable: 50, 150, 225, 300, 375, 450, 525, 600, 675, 750, 825, 900, 975, 1050, 1125mmHg (1050 & 1125mmHg are not applicable for 50ml/60ml syringe).<br>For 1ml, 2ml, 3ml and 5ml syringes:<br>3 levels selectable: High (900mmHg), Med (600mmHg) and Low (300mmHg)<br>The maximum occlusion pressure is $\leq 1350$ mmHg.                                                                                                                |  |
| Occlusion alarm tolerance                     | For the 10ml, 20ml, 30ml, 50ml, 60ml syringes:<br>$50^{+170}_{-45}$ mmHg for 50mmHg level                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| Maximum volume (under single fault condition) | $\leq 0.2$ ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| KVO flow rate                                 | 1ml syringe (0.01~5.00)ml/h<br>other syringe sizes (0.10~5.00)ml/h<br>Minimum resolution 0.01ml/h                                                                                                                                                                                                                                                                                                                                                                                                       |  |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Infused time set range    | 00:00:01~99:59:59 (h:min:sec), minimum resolution 1s                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |
| VTBI set range            | 0.10~9999.99ml, minimum resolution 0.01ml/h                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |
| Infused volume range      | 0.00~99999.99ml, minimum resolution 0.01ml/h                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |
| Weight                    | Setup range 0.1~499.0kg<br>Units: kg, lb                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |
| Drug Amt.                 | Set range 0.001~99999<br>Units: ng, ug, mg, g, mU, U, kU, EU, mmol, mol, mcal, cal, kcal, mEq.                                                                                                                                                                                                                                                                                                                                                                                                    |                        |
| Dose rate                 | Set range: 0.001~99999<br>Units: X/min, X/h, X/24h, X/kg/h, X/kg/24h, in which X represents ng, ug, mg, g, mU, U, kU, EU, mmol, mol, mcal, cal, kcal, and mEq.                                                                                                                                                                                                                                                                                                                                    |                        |
| Volume                    | Set range 0.10~9999.99ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |
| Concentration             | Setup range 0.001~9999.99<br>Units: ng/ml, ug/ml, mg/ml, g/ml, mU/ml, U/ml, KU/ml, EU/ml, mmol/ml, mol/ml, mcal/ml, cal/ml, kcal/ml, mEq/ml                                                                                                                                                                                                                                                                                                                                                       |                        |
| Defibrillation protection | Recovery time: < 1s (after defibrillation)                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |
| Storage Capacity          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
| History records           | P300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | More than 5000 events  |
|                           | P300 Neo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | More than 6000 events  |
|                           | P300 Ex                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | More than 8000 events  |
|                           | P300 Pro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | More than 10000 events |
| Drug management (option)  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
| Drug library              | Supports a customizable drug library of up to 5000 drug profiles, 30 categories, 20 types color-coding drug names. (No default drug list is preloaded)                                                                                                                                                                                                                                                                                                                                            |                        |
| Auto lock Protection      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
| Screen lock protection    | Non-infusion state: Default 3 min. 1min, 2min, 3min, 4min, 5min,and off selectable.<br>Infusion state: Default 30s. 15s, 30s,1min, 2min, 3min, 4min, 5min, and off selectable.                                                                                                                                                                                                                                                                                                                    |                        |
| Syringes                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
| Compatibility             | 1ml, 2ml, 3ml, 5ml, 10ml, 20ml, 30ml, 50ml, 60ml automatic recognition of syringe size                                                                                                                                                                                                                                                                                                                                                                                                            |                        |
| Alarm                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
| Type                      | Audible and visual alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |
| 3 levels                  | High: Occlusion/ Syringe Empty/ Syringe Disengaged/ Plunger Grippers Error/Extension Tube Disconnected/ Relay Invalid/ Battery Depleted/ VTBI Complete/ KVO Finish/ Relay Invalid/ System Error/ No Syringe<br><br>Middle: Near Occlusion/ CMS Disconnected/<br><br>Low: Syringe Near Empty/VTBI Near Complete/ KVO Running/ No Battery/ Battery Error/ No External Power Supply/ Low Battery/ Standby Time Expired/ Dock Connection Interrupted/ System Time Error/ Relay Invalid Soon/ Reminder |                        |

|                                           |                                                                                                                |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Reminder setting                          | Non-operation state: Default 2min.<br>Range: 1 min, 2min, 3min, 4min, 5min, and off                            |
| Sound volume                              | 0-10 levels selectable, default is level 2                                                                     |
| <b>Connectivity</b>                       |                                                                                                                |
| Communication                             | Wired/Wireless                                                                                                 |
| USB                                       | Support drug library import, patient data import/export, history record export, calibration data import/export |
| Multifunctional adapter                   | RS232, nurse call connector, DC adapter                                                                        |
| Protocol                                  | IEEE 802.11 a/b/g/n                                                                                            |
| Modulation mode                           | DSSS, OFDM, DBPSK, DQPSK, CCK, QAM                                                                             |
| Operating frequency                       | 2.4GHz: 2.412 ~ 2.484GHz<br>5GHz: 4.915 ~ 5.925GHz                                                             |
| Data security                             | Standard: WPA-PSK and WPA2-PSK<br>Encryption: TKIP and AES                                                     |
| Delay time of network disconnection alarm | ≤14s                                                                                                           |
| Integration                               | Connect with BioFusion infusion central station, P series & G series patient monitor, UM series urine monitor  |

### Working Mode

|                |                                                                                                                                                                   |                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Common modes   | Rate mode, Time mode, Micro mode, Weight mode, Sequence mode, Loading dose mode, Intermittent mode, Ramp mode, Dose time mode, TIVA mode, TCI mode, and PCA mode. |                                                                           |
| TCI parameters | Drug name                                                                                                                                                         | Mode                                                                      |
|                | Propofol                                                                                                                                                          | Marsh<br>Schnider<br>Kataria<br>Paedfusor<br>Elefeld<br>Elefeld (+Opioid) |
|                | Remifentanil                                                                                                                                                      | Minto                                                                     |
|                | Alfentanil                                                                                                                                                        | Maitre                                                                    |
|                | Fentanyl                                                                                                                                                          | Shafer                                                                    |
|                | Dexmedetomidine                                                                                                                                                   | Dyck                                                                      |
|                | Sufentanil                                                                                                                                                        | Gepts<br>Bovill                                                           |
|                |                                                                                                                                                                   |                                                                           |
|                |                                                                                                                                                                   |                                                                           |
|                |                                                                                                                                                                   |                                                                           |
|                |                                                                                                                                                                   |                                                                           |
|                |                                                                                                                                                                   |                                                                           |
|                |                                                                                                                                                                   |                                                                           |

### Work Environment

|                     |                                                                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature         | 5-40°C for operating, -20-60 °C for storage                                                                                                                                        |
| Relative humidity   | 15-95% for operating, 10-95% for storage                                                                                                                                           |
| Atmosphere pressure | 57.0-107.4 kPa for operating, 16.0-107.4 kPa for storage                                                                                                                           |
| Classification      | Class I, Type CF                                                                                                                                                                   |
| Stackability        | Supported with Infusion Supervision System and Handle.<br>Maximum of 12 pumps can be stacked with a Infusion Supervision System<br>Maximum of 3 pumps can be stacked with a handle |

### Battery

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| Type           | Lithium battery, 11.1VDC, 3100mAh                                      |
| Operating time | ≥ 7 hours at rate of 5.00ml/h<br>Under standard operating conditions   |
| Charging time  | ≤4 hours when the pump is off<br>≤8 hours when the pump is on          |
| Shutdown delay | At least 30min at a rate of 5.00ml/h after the first low battery alarm |

### Power Supply

Voltage 100-240 V~, 15VDC, frequency 50/60Hz, input current 0.43-0.22A

\*Specifications subject to change without prior notice.