# LeSplit® Split Data Acquisition Vehicle

## User Guide


Shanghai LePure Biotech Co., Ltd.

# Catalogue

# 1. Product Introduction

LeSplit® split data acquisition vehicle is composed of stainless steel shell and control system composed of Siemens IPC, PLC, wincc software and electrical components, and LeMagmixer® disposable liquid dispensing system, liquid dispensing system, etc. can be used to achieve data recording, audit trail, authority management and other functions. The equipment adopts modular design, capacitive screen touch operation interface, data partition collection, and management system, which can flexibly assemble and disassemble the sensor module as needed. This design can adapt the trolley to different working conditions and working scenarios, and is also convenient for maintenance and upgrades.

# 2. Product Application

- Stirring and dosing system
- Other small systems

# 3. Product Features

- The control unit is integrated into a mobile trolley, which is independent of the mixing tank
- The drive trolley is designed with various sensor plugs
- Reserved interface, you can choose the function module docking independently
- It can realize the docking of tanks of different specifications controlled by one control cabinet
- Meet the functions of authority management, audit trail, data record, batch report and so on
- Can connect to SCADA, MES and other central control systems, reserve Ethernet interface, support TCP/IP protocol

# 4. Compliance

The LeSplit® single-use split mixer data acquisition vehicle complies with CE standards in the European Community countries.

- Machinery Directive(MD)2006/42/EC
- Low Voltage Directive (LVD) 2014/35/EU
- EN ISO12100:2010
- EN 60204-1:2006+A1:2009+AC:2010
- CE
- EN ISO 9001


# 5. Equipment Ordering and Selection

| Description | Specification |
|---|---|
| Housing material | SS304 |
| Surface roughness | Drawing Ra≤0.8μm |
| Fit volume | 50L-3000L |
| Power & power | 220V±10%&900W |
| Operating temperature | 0-60℃ |
| HMI | Siemens 12″ IPC |
| Control system | Siemens CPU+PLC |
| Data interface | RJ45/USB |
| Communication protocol | Supports TCP/IP protocol |

# 6. Equipment Ordering and Selection

Optional module

| | Integrated function module (optional) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Name | pH | CT | DO | TT | weigh | Print | Peristaltic pump | TCU |
| Module branding | Hamilton | Hamilton | Hamilton | GTAM | WIKA | weihuang | Masterflex | LAUDA |
| | Mettler | Mettler | Mettler | Labom | Mettler | NA | Watson-Marlow | LEPURE |
| Module selection | YES ☐ | YES ☐ | YES ☐ | YES ☐ | YES ☐ | YES ☐ | YES ☐ | YES ☐ |
| | NO ☐ | NO ☐ | NO ☐ | NO ☐ | NO ☐ | NO ☐ | NO ☐ | NO ☐ |

# 7. Standard ordering information

| Stock code | Device family | voltage | pH | TT | weigh | CT | HMI | print |
|---|---|---|---|---|---|---|---|---|
| BMCCZ000 | Split data acquisition vehicle | 220V± 10% | √ | √ | √ | √ | √ | √ |

# 8. Power plug selection

Plug Information:

| | | |
|---|---|---|
| ☐ | EU |  |
| ☐ | US |  |
| ☐ | UK |  |
| ☐ | JP |  |

# 9. System optional sensor function parameters

| | | |
|---|---|---|
| Weigh |  | The equipment can be equipped with METTLER or equivalent brand weigh module, which can display weighing data in real time, calibrate the weighing module online, and the control system can fully automatic data recording and storage. Weighing range: |

| | | |
|---|---|---|
| | | 0~120%*FS, weighing accuracy: ±0.3%. |
| Temperature sensor |  | Temperature sensor, real-time display of temperature value on the display, control system can fully automatic data recording and storage. Temperature measurement range: 0~60 °C, accuracy: ±0.5 °C. |
| pH |  | pH sensor with automatic temperature compensation, real-time pH value display on the display, sensor calibration, and fully automatic data logging and storage by the control system. pH measurement range: 0~14, accuracy: ±0.05. |
| CT |  | The equipment can be equipped with a conductivity sensor, including automatic temperature compensation, the conductivity value can be displayed in real time on the display, the sensor can be calibrated online, and the control system can fully automatic data recording and storage. Conductance measurement range: 1us-300mS/cm, accuracy: ±5%. |
| DO |  | The equipment can be equipped with a conductivity sensor, including automatic temperature compensation, the conductivity value can be displayed in real time on the display, the sensor can be calibrated online, and the |

| | | |
|---|---|---|
| | | control system can fully automatic data recording and storage. Measuring range: 0~100%*Sat (METTLER)/0~300%*SAT (Hamilton), accuracy: ±1%+6 ppb (METTLER) or ±1% (Hamilton). |
| Printers |  | Online micro non-thermal printer that can print weight, temperature, pH and other monitoring data in real time. |
| Peristaltic pump (acid and alkali regulation) |  | 1 or 2 peristaltic pumps are available on request for the transfer of acids and/or lyes, and the peristaltic pump is controlled by a variable speed of 8 / 15 knots via the control system for precise pH adjustment |

# 10. Description of the control system

The control system mainly has Siemens CPU and 12-inch IPC industrial computer components of the control system platform, the control system has its own separate control cabinet, the cabinet material is 304 stainless steel, protection grade IP54, the cabinet is equipped with filter plates, etc. The CPU and its accessories and communication modules are installed on the internal mounting board of the cabinet, and the IPC will be installed above the front door of the cabinet and the position of operation. The control system can control all functions, can fully automatic data collection and storage records, with password security management, authority

management, alarm function, audit trail and batch report and other functions, data can be exported by PDF, in line with the GMP regulatory requirements of 21CFRpare11.

# 11. Alarm description

The control system has automatic program detection and process parameter monitoring alarm functions. When the alarm condition is triggered, the program enters the alarm phase, beeps the alarm, and pauses the operation of the device. Alarm ranges include

- Abnormal monitoring parameters beyond the safety threshold range (speed, weight, temperature, pH, conductivity, DO)
- Power failure
- Abnormal sensor connection

# 12. Shipping Packaging

- Wooden box - logistics and transportation

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