

LeMagmixer[®]'s large-volume disposable magnetic stirring system

User Guide



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一、 Product Introduction

LeMagmixer® disposable magnetic stirring system consists of a stainless steel housing and dual magnetic stirring motors as well as a control system, which can be used in conjunction with the LeKrius® disposable mixing bag for liquid-liquid mixing or solid-liquid mixing. It is mostly used for buffer configuration, storage and transfer after medium filtration, intermediate product storage, stock solution preparation, and storage; Flexible customization of various sensor functions to meet the needs of online monitoring during the formulation process, integrated control system to ensure data integrity.

Product Application:

- Buffer preparation
- Media preparation
- Mix the purified intermediate products
- Adjust pH
- Preparation of semi-finished products
- Vaccine adjuvant process

二、 Product Features

- The horizontal double stirring drive unit and the mixing bag paddle transmit power by magnetic coupling, without shaft seal

- All kinds of sensor plugs reserve interface, can independently choose the function module docking
- Touch screen operation interface to ensure data integrity
- Hidden cable for easy cleaning
- 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.

三、LeKrius® disposable mixing bag

- Flexible configuration of liquid inlet pipeline, feeding port, liquid outlet line, sampling pipeline, sensor placement pipeline, bellows, etc. of the liquid bag to meet various needs. The disposable paddle is welded to the bottom of the liquid bag (Figure 1.Disposable paddle), and the connection between the motor and the disposable blade is achieved by strong magnetic coupling, which can achieve high torque and fast mixing.



Figure 1. Disposable paddles

四、Compliance

LeMagmixer® disposable magnetic mixer drives comply 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

五、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 <input type="checkbox"/>	YES <input type="checkbox"/>	YES <input type="checkbox"/>	YES <input type="checkbox"/>	YES <input type="checkbox"/>	YES <input type="checkbox"/>	YES <input type="checkbox"/>	YES <input type="checkbox"/>
	NO <input type="checkbox"/>	NO <input type="checkbox"/>	NO <input type="checkbox"/>	NO <input type="checkbox"/>	NO <input type="checkbox"/>	NO <input type="checkbox"/>	NO <input type="checkbox"/>	NO <input type="checkbox"/>

- Standard ordering information

Stock code	Mixer	pH	TT	Weigh	CT	HMI	Print	Jacket	TCU	Peristaltic pump	Note
BMDSP000	√										2000L
BMDSP001	√			√		√					2000L
BMDSP002	√			√		√		√			2000L
BMDSP003	√	√	√	√	√	√	√				2000L
BMDSP004	√	√	√	√	√	√	√	√	√	√	2000L
BMDSP005	√	√		√		√				√	2000L

六、 Common System - Socket Selection

- PLUG INFORMATION

<input type="checkbox"/>	EU	
<input type="checkbox"/>	US	
<input type="checkbox"/>	UK	
<input type="checkbox"/>	JP	

七、 Basic design parameters

Note: The "●" symbol indicates that this feature is optional

Description	Specification	
Support container material	SS304	
Surface polishing	Ra≤0.8μm	
Processing	Wire drawing or sandblasting	
Temperature control jacket	SS304, honeycomb jacket	●
Jacket inlet and outlet	下进上出, TC50.5mm	●
Jacket design pressure	0.5Mpa	
Mixing volume	400L-2000L	
Stirring motor	Panasonic	
Stirring speed	0-200rpm	
Power requirements & power	220V±10%/50HZ&1500W	
Minimum stirring volume	≤ 20% of nominal volume	
Operating temperature	0-60°C	
Control system	Siemens wincc	
Data interface	RJ45/USB	
Weigh modules	Mettler/WIKA, C3	●
pH sensor	Hamilton/Mettler	●
CT sensor	Hamilton/Mettler	●

DO sensor	Hamilton/Mettler	•
Temperature sensor	GTAM / Labom	•
Printers	WH-E36	•
Peristaltic pump (acid and alkali regulation)	Masterflex/Watson-Marlow	•
Move the castors	Foreman	


Remarks: In order to better provide high-quality process solutions, Lepurelose can provide full-scale specification customization services





八、Reference of equipment size and weight parameters



Volume(L)	Tank classification	Tank size(mm)(L*W*H)			Actual volume (L)	EQUIPMENT UNLADEN WEIGHT (KG)	Drain size (mm)	Sample port size (mm)	Device base form factor (mm) L*W*H
2000	monolayer	2100	1200	94	236	955	160*70	260*60	2120*1220*1610
	Jacket			0	9	1213			2210*1310*1610

Specific dimensions and design details refer to the corresponding mechanical layout drawing

九、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: $\pm 0.3\%$.
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<p>Temperature sensor</p>		<p>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.</p>
<p>pH</p>		<p>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.</p>
<p>CT</p>		<p>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%.</p>
<p>DO</p>		<p>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).</p>

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

†、 List of random documents

No.:	File	Main content	
1	OM	Instructions for use of the device	NA
2	EWD	Electrical schematic	NA
3	MCL	List of major parts	NA
4	GA	Assembly drawing	NA
5	FAT	Factory acceptance test scheme	NA
6	SAT	Site acceptance test plan	Optional
7	IQ	Installation confirmation	NA
8	OQ	Run confirmation	NA
9	As-built construction documents	Material proof, etc	NA
10	Other	Additional file requirements	NA

十一、 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.

十二、 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

十三、 Shipping Packaging

Wooden box - sea freight

LEPURE

LEPURE

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