



### (1) Function Overview

ISM-300S is a solder paste life control system that solves the problems of storing, reheating, stirring, tracing, controlling, and scrapping solder paste materials in intelligent factories. The system consists of intelligent solder paste storage and reheating stirring equipment and Enexi paste life cycle management software.

In actual production, the system will intelligently interact with the work order, solder paste lifecycle management software, and intelligent solder paste storage and heating mixing equipment to achieve intelligent storage, intelligent heating, and intelligent mixing of solder paste. The entire process does not require manual intervention, all data is real-time transparent, and can be traced and queried at any time.

The intelligent solder paste storage and temperature return mixing device is equipped with an intelligent robotic arm, which can automatically transfer the solder paste from the refrigeration area to the temperature return area for temperature return. After the temperature return is completed, the solder paste will be automatically transferred to the solder paste mixing area for mixing. After mixing, the solder paste will be automatically sent to the outlet position. The solder paste lifecycle management software can accurately control the usage process of each can of solder paste/red glue, and can provide MySQL database format files, providing necessary data sources for the factory's MES, ERP, and WMS systems.

## (2) Equipment specification parameters

No.	Project	Content
1	model	ISM-300S
2	Packaging type for storing products	500g can of solder paste, 200g can of red glue, and 100g syringe of solder paste
3	Maximum refrigerated storage quantity	144 positions (calculated based on 500g solder paste)
4	Maximum storage quantity for reheating	16 positions
5	Maximum quantity of single batch receipt	30 cans (calculated based on 500g solder paste)
6	Maximum quantity of solder paste prepared at a time	8 cans
7	Barcode Type	QR code, automatic input
8	Scanning method	Automatic QR code scanning
9	Weighing function	Inventory weighing&return weighing
10	Weighing range	10 to 1000 grams
11	Weighing accuracy	$\pm 5$ grams
12	Refrigeration temperature range	2 °C -8 °C can be set, which is the upper and lower limits of the temperature in the refrigeration area
13	Refrigeration temperature accuracy	$\pm 2$ °C
14	Return temperature range	23 °C $\pm 5$ °C
15	Heating method	Thermostatic box return temperature
16	Mixing speed	Maximum 1000 rpm
17	Mixing rotation control and speed	Follow the revolution and rotate, with a maximum speed of 400 revolutions per minute
18	Mixing time range	1-10 minutes/time
19	Solder paste stirring	Supports stirring of solder paste of any weight between 0-500g
20	Stirring balance	Automatic balancing
21	Mixing method	Centrifuge force generated by revolution and rotation
22	Access rules	First in, First out&Half tank priority
23	Arm grasping accuracy	$\pm 1$ mm
24	Grab method of solder paste	Robot arm
25	Communication protocol type	TCP/IP network port+MySQL database
26	Operation method	Industrial control computer+upper computer software
27	work environment	23 °C $\pm 5$ °C
28	Work noise	Less than 60 decibels
29	Equipment size (depth * width * height)	1208mm * 1230mm * 2000mm
30	Equipment weight	Approximately 650KG
31	Equipment air source	Pressure 0.5~0.6Mpa, flow rate 10L/hour
32	Equipment power supply	220VAC $\pm 10\%$ 50/60HZ 16A Max.3.5KW