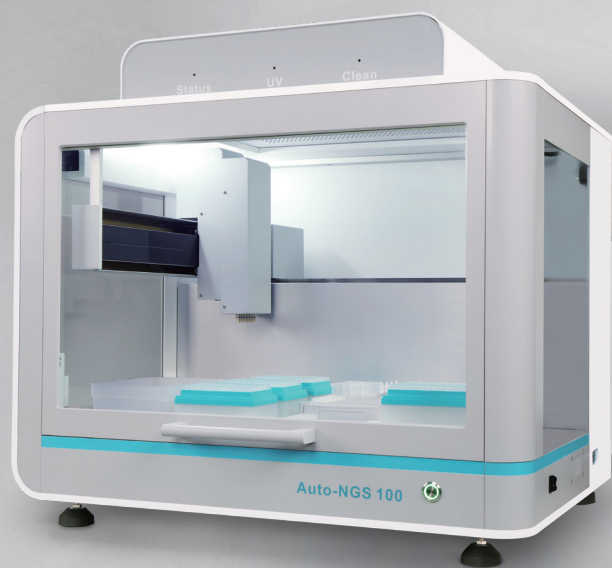


**ALLSHENG**

**Auto-NGS 100**

**NGS Library Preparation Workstation**



**---- Designed for NGS Applications**

**HANGZHOU ALLSHENG INSTRUMENTS CO., LTD.**

## Next-Generation Gene Sequencing Workflow



## Next-Generation Gene Sequencing Sample Prep Solutions Suite



Nucleic Acid Purification System



Micro-Spectrophotometer



Fluorometer



Fluorescence Microplate Reader

## Product Introduction



Sample preparation is the key to high-quality data for Nucleic Acid Sequencing. Errors in library preparation lead to loss of precious samples and wasted reagents.

Consider our automation to achieve more uniform library preparations. With automation, we can improve the quality of libraries and lower overall cost, and while reducing workload.

Auto-NGS 100 is a compact, flexible and easy to use library prep system. It is designed for efficient sample preparation of up to 24 NGS libraries. Auto-NGS 100 has a simple tabletop design and an intuitive user interface, which can avoid user misoperation. And it has a UV sterilization lamp and a high-efficiency purification filter device to avoid cross-contamination. Auto-NGS 100 adopts an intuitive GUI to guide

users to select and edit the program to be run, quickly complete the layout of the table, and display the running status and detailed information in real time. The open design can accommodate different reagent suppliers and sequencing platforms.

The design of Auto-NGS 100 meets the high-efficiency sample preparation of up to 24 NGS libraries per run. The system has a user-friendly software, supporting accessories and a professional team to ensure that you can run actual samples in a short time. Auto-NGS 100 and supporting services can help you continuously optimize your existing methods to obtain ideal results and provide you with a good library preparation experience.

## PRODUCT FEATURES



### Precise Pipetting

Equipped with an 8-channel pipettor  
Pipetting range: 2-200  $\mu\text{L}$   
Precision: 2  $\mu\text{L}$ , <5 %; 200  $\mu\text{L}$ , <1 %  
Accuracy: 2  $\mu\text{L}$ , <10 %; 200  $\mu\text{L}$ , <1 %



### Multiple Functions & Open Software Design

Multi-level account management system to support the different needs of new users and advanced users

Drag-and-drop tasks simplifies program startup GUI is can be easy to understand, easy to operate even for beginners

Real-time display of operation status, efficient tracking of the procedure progress



### Innovative Design

Auto-NGS 100 Workstation:

- 9 tiles and waste liquid container, TIP off box
- Heating / cooling tile
- High-power magnetic tile

In addition, the workstation can be customized according to actual needs.



### Equipped with Multiple Functional Modules

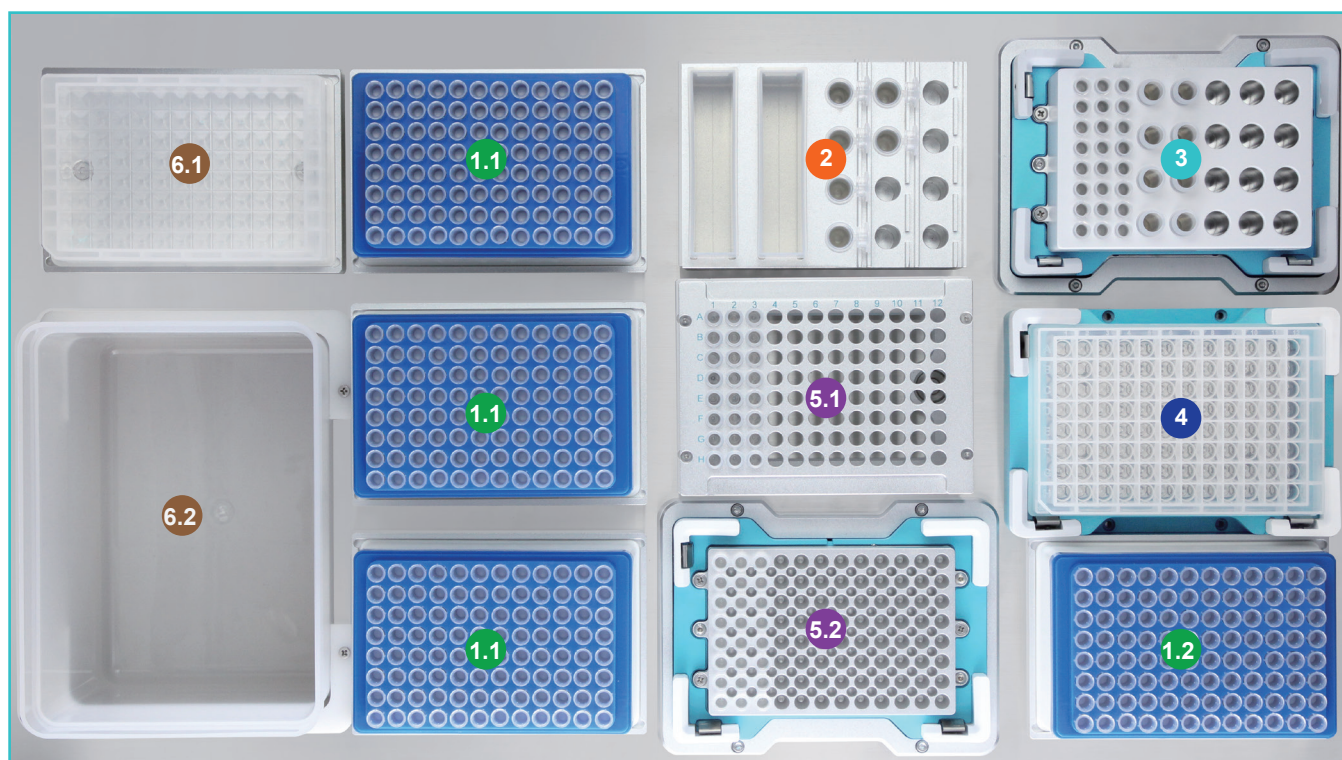
2 units temperature control module  
Temperature range: 4~105  $^{\circ}\text{C}$   
Temperature accuracy: 0.5  $^{\circ}\text{C}$ , @55  $^{\circ}\text{C}$   
Temperature uniformity: 0.5  $^{\circ}\text{C}$ , @55  $^{\circ}\text{C}$   
High-efficiency automatic lifting magnetic plate



### Full Contamination Control

Equipped with high-efficiency purification filtration system and UV lamp sterilization to prevent cross-contamination of the experimental cabin.

## Plate Layout



### TIP Area -- Position 1.1, 1.2

1.1 3×200 µL TIP holders  
 1.2 1×200 µL independent TIP holder, used for single-channel pipetting. Flexible tip loading mode, can save time and reduce consumption.

### Reagent Area -- Position 2

Can be equipped with a reagent rack (2×60 mL storage tank + 12×2.0 mL centrifuge tube)  
 The reagent slot module can be selected according to the customer's experimental needs.

### Temperature Control Area -- Position 3

Temperature control range: 4-105 °C  
 Module structure: 3 - 8×0.2 mL PCR tubes + 20×2.0 mL tubes  
 Temperature accuracy: 0.5 °C, @55 °C  
 Temperature uniformity: 0.5 °C, @55 °C

### Magnetic Plate -- Position 4

Equipped with 96-well magnetic plate by rising and falling to combine and separate the magnetic beads.

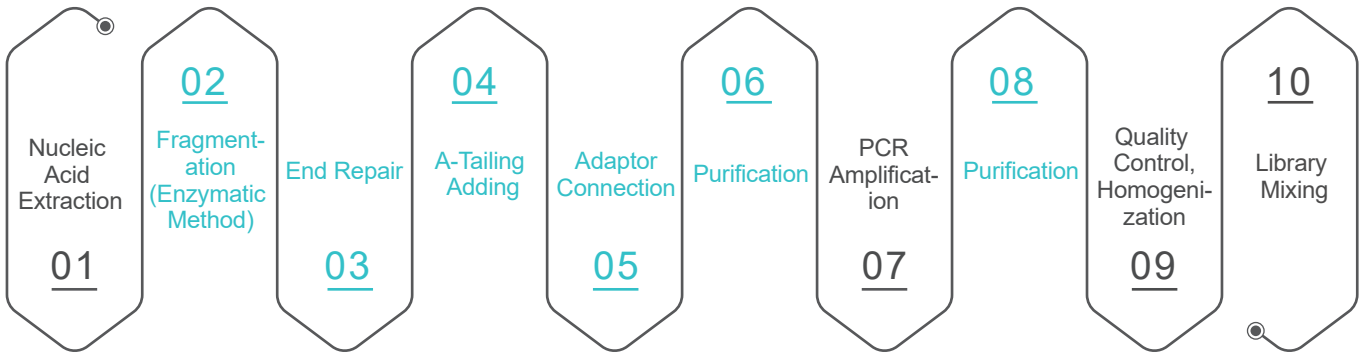
### Sample Area -- Position 5.1, 5.2

5.1 Equipped with a normal sample rack  
 5.2 Equipped with temperature control module.  
 Temperature control range: 4~105 °C  
 Temperature accuracy: 0.5 °C, @55 °C  
 Temperature uniformity: 0.5 °C, @55 °C

### Waste Area -- Position 6.1, 6.2

6.1 300 mL waste liquid container  
 6.2 TIP off box  
 Both the waste liquid container and TIP off box can be freely accessible.

## Introduction of DNA Library Construction Workflow



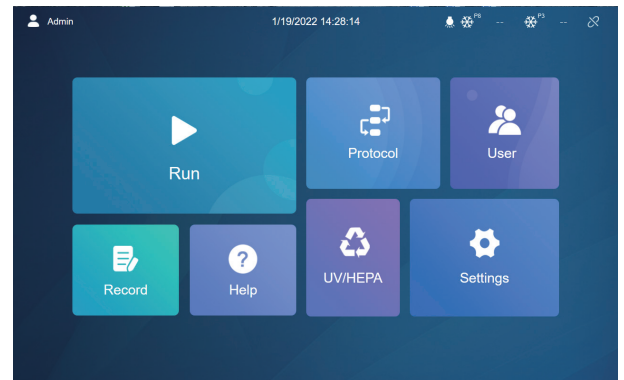
Steps that can be automated on Auto-NGS 100

## Software

In order to facilitate the use of Auto-NGS 100, our R&D team can customize the design according to the needs of customers for common NGS library construction methods. Simple and intuitive GUI ensures that you can quickly run the library construction program after the system is installed. The intuitive GUI makes the software convenient to help you create and run the automated liquid handling protocols.

### Main Page

The main page has a simple layout, which is convenient, reasonable and easy to be understood.



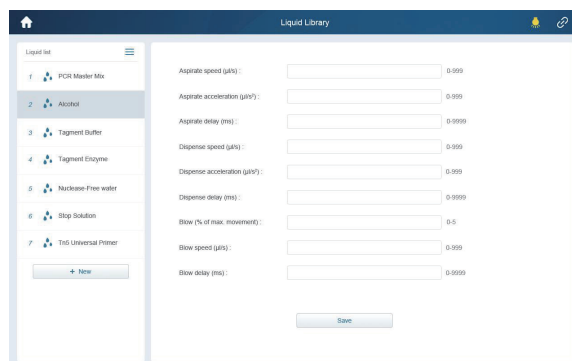
### User Interface

Users are divided into administrator accounts and sub-accounts. The administrator has the highest authority, which can assign and manage sub-account authority to facilitate instrument use and laboratory management.

NO.	User name	Creator	Group	Creation time	Operate
1	Protocol 1	Doctor Zhang	User	7/11/2020 16:45:30	
2	Protocol 2	Doctor Wang	User	7/13/2020 10:45:30	
3	Protocol 3	Doctor Zhang	User	7/13/2020 10:45:30	
4	Protocol 4	Doctor Zhang	Advanced User	7/14/2020 16:45:30	
5	Protocol 5	Admin	Advanced User	7/15/2020 10:45:30	
6	Protocol 6	Doctor Wang	Advanced User	7/16/2020 09:45:30	

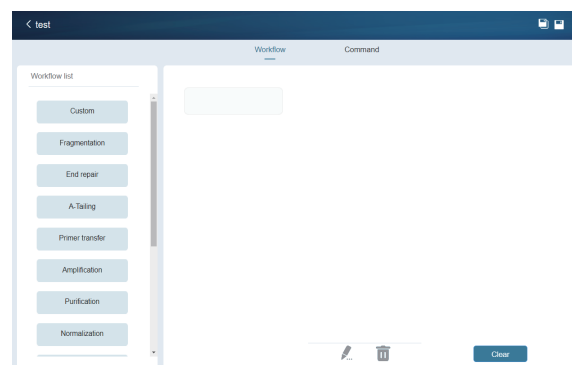
## Liquid Library

According to the different reagents required for experiments, the liquid library classification management based on various liquid aspiration parameters help to improve the accuracy of liquid aspiration.



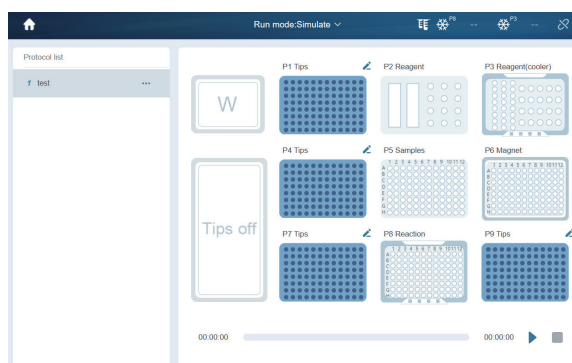
## Program Interface

The program settings are open and flexible. Different processes such as reagent transfer, waiting, and sample transfer can be set up according to different kits to meet the needs of different experimental steps.



## Running Interface

Intuitive and concise operation interface can display experiment status in real time. Easy to confirm before running to ensure the experiment can be carried out accurately.



## Detailed Running Records

The running log detailedly records each running steps of the instrument and can be viewed at any time.

No.	Protocol	Tester	Time	Report
1	protocol	Admin	07-19-2021 11:02:21	View
2	protocol	Admin	07-17-2021 16:13:51	View
3	protocol	Admin	07-17-2021 15:58:19	View
4	protocol	Admin	07-17-2021 15:52:29	View
5	test2	Admin	07-17-2021 15:01:29	View
6	test2	Admin	07-17-2021 14:56:21	View
7	测试	Admin	07-17-2021 14:45:23	View
8	测试	Admin	07-17-2021 14:43:10	View
9	测试	Admin	07-17-2021 14:37:57	View
10	测试	Admin	07-17-2021 14:37:41	View
11	测试	Admin	07-17-2021 14:23:51	View
12	测试	Admin	07-17-2021 14:07:05	View
13	pp	SAS	07-17-2021 13:58:53	View

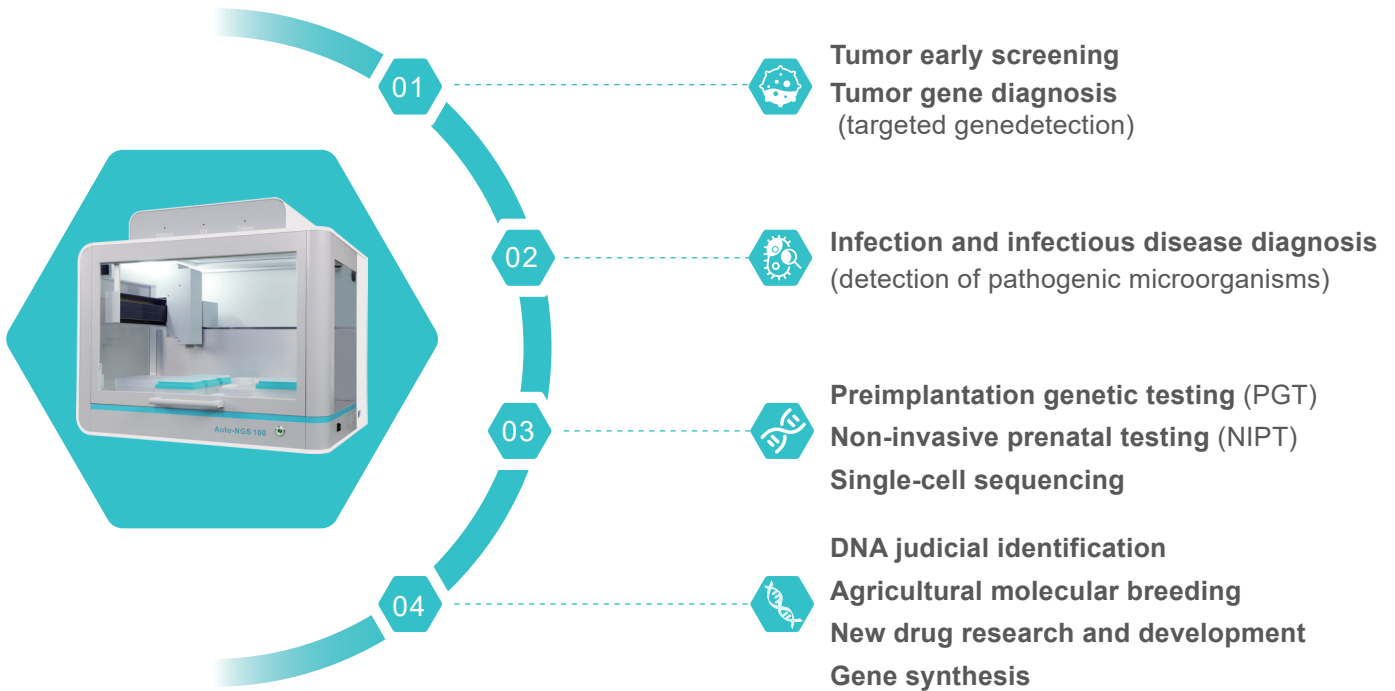
## PCR System Construction Software

Simple and easy-to-use PCR system set-up to meet your daily experiment needs.

## Barcode Reading & Tracking Sample Batch Number

To ensure quality control with handheld barcode scanner.

## Application



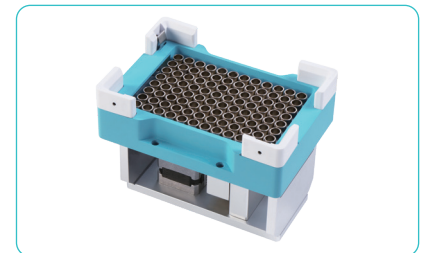
## Accessories Selection Guide

### 1. Au-Magnet 100 Magnetic Plate for Workstation (96 Deepwell Plate) Au-Magnet 200 Magnetic Plate for Workstation (96 PCR Plate)

Code: AS-27021-06 Au-Magnet 100

Code: AS-27021-07 Au-Magnet 200

Remark: This system usually uses the Au-magnet 100 for 96 deepwell plate



### 2. Au-Cooler Dry Bath Incubator for Workstation (Heating and Cooling )

Code: AS-27021-08 Au-Cooler

Temperature control range: 4-105 °C

Module structure: 3 - 8×0.2 mL PCR tubes + 20×2.0 mL tubes

Temperature accuracy and uniformity: 0.5 °C, @55 °C

Optional modules: can be customized according to requirements



### 3. TIP Off Box:

Code: AS-27021-01

Remark: Used to place consumables consumed during the experiment.  
Need to put on a plastic bag before use.

Size (W×D×H) mm: 129×180×140





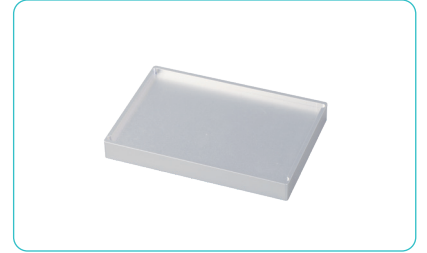
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#### 4. Standard Tray:

Code: AS-27021-02

Remark: Standard height plate for 200  $\mu$ L SBS Tips consumables

Adapted consumables: 200  $\mu$ L SBS Tips consumables, deepwell plates



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#### 5. Heightened Tray:

Code: AS-27021-03

Remark: Higher than the standard height plate. The slightly higher design can avoid the interference caused when the 8-channel pipettor is used as a single channel.

Adapted consumables: 200  $\mu$ L SBS Tips onsumables, deepwell plates



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#### 6. PCR Tube Holder:

Code: AS-27021-04

Remark: 8-200  $\mu$ L strip tube adapter

Adapted consumables: 8-strip PCR tube and non-skirted 96-well PCR plate



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#### 7. Reagent Rack:

Code: AS-27021-05

Remark: Store reagents at room temperature

Adapted consumables: place 2 $\times$ 60 mL reservoir and 12 $\times$ 2 mL / 1.5 mL tubes

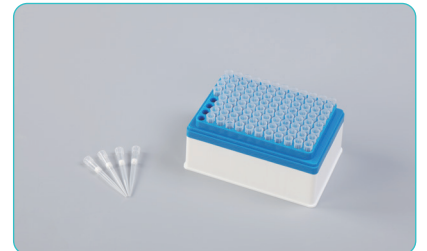


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#### 8. 200 $\mu$ L SBS Tips:

Code: AS-TTF-200-NS / AS-TTF-200-NSL

Remark: Maximum pipetting volume 200  $\mu$ L



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#### 9. 60 mL Reagent Tank:

Code: AS-RT-60-N

Remark: Transparent and sterile



## Specification

<b>Model</b>	<b>Auto-NGS 100</b>				
Throughput	1-24				
Tiles number	9 standard tiles + (TIP off box + waste liquid area)				
Pipettor	Pipettor type	8-channel fixed spacing pipettors, can be used as a single channel			
	Pipetting principle	Air displacement pipetting technology			
	Pipetting range	2-200 $\mu$ L			
	Precision(CV)	1 $\mu$ L: $\leq$ 5 %	20 $\mu$ L: $\leq$ 2 %	100 $\mu$ L: $\leq$ 1 %	200 $\mu$ L: $\leq$ 1 %
	Accuracy	2 $\mu$ L: $\leq$ 15 %	20 $\mu$ L: $\leq$ 1.5 %	100 $\mu$ L: $\leq$ 1 %	200 $\mu$ L: $\leq$ 1 %
Available well plate	SBS standard 24/96/384 deep and shallow well plates				
Consumable	Matching Allsheng TIP				
Extraction processing volume	50~1000 $\mu$ L				
Extraction uniformity	CV $\leq$ 5 %				
Temperature control module	Equipped with 2 temperature control modules; Temperature control range: 4~105 $^{\circ}$ C				
Magnetic plate	96-well annular magnetic plate				
UV sterilization	Equipped with UV sterilization lamp, high-efficiency purification filter device				
Instrument port	USB port, CAN communication				
Ambient condition	Temperature requirement: 10~40 $^{\circ}$ C, humidity: $\leq$ 80 %				
Power input	100~240 V, 50~60 Hz, power 300 W				
Size (W×D×H) mm	740×630×670				

### ● Consumables

Code	Description	Remark
AS-22012-201	1.6 mL 96-well U deepwell plate	/
AS-22012-202	2.0 mL 96-well U deepwell plate	/
AS-22012-203	96 V bottom reservoir	/
AS-RT-60-N	Disposable 60 mL reagent tank, PP material, transparent and sterile	20 pcs/bag, 10 bags/carton

## Ordering Information

Code	Description
AS-27020-00	Auto-NGS 100 NGS library preparation workstation, 100-24 V AC, 300 W
AS-27021-01	TIP off box (recommended to store less than 700 pic)
AS-27021-02	Standard tray (Standard height plate for 200 $\mu$ L SBS Tips consumables)
AS-27021-03	Heightened tray (Higher than the Standard tray for 200 $\mu$ L SBS Tips consumables)
AS-27021-04	PCR tube holder ( 8-strip PCR tube, non-skirted 96-well PCR plate)
AS-27021-05	Reagent rack (place 2 $\times$ 60 mL reservoir and 12 $\times$ 2 mL / 1.5 mL tubes)
AS-27021-06	Au-Magnet 100 magnetic plate for workstation (96 deepwell plate), 24 V DC, 10 W, with CAN
AS-27021-07	Au-Magnet 200 magnetic plate for workstation (96 PCR plate), 24 V DC, 10 W, with CAN
AS-27021-08	Au-Cooler dry bath incubator for workstation (heating and cooling type), 24 V DC, 160 W, with CAN

### ● TIP Consumables

Code	Packing	Volume	Description
AS-TT-200-N	96 pcs/box, 24 boxes/carton	200 $\mu$ L	Allsheng tip, transparent, boxed
AS-TT-200-NL	96 pcs/box, 24 boxes/carton	200 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption
AS-TT-200-NS	96 pcs/box, 24 boxes/carton	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile
AS-TT-200-NSL	96 pcs/box, 24 boxes/carton	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption
AS-TTF-200-NS	96 pcs/box, 24 boxes/carton	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element
AS-TTF-200-NSL	96 pcs/box, 24 boxes/carton	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption
AS-TT-50-N	96 pcs/box, 24 boxes/carton	50 $\mu$ L	Allsheng tip, transparent, boxed
AS-TT-50-NL	96 pcs/box, 24 boxes/carton	50 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption
AS-TT-50-NS	96 pcs/box, 24 boxes/carton	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile
AS-TT-50-NSL	96 pcs/box, 24 boxes/carton	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption
AS-TTF-50-NS	96 pcs/box, 24 boxes/carton	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element
AS-TTF-50-NSL	96 pcs/box, 24 boxes/carton	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption

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