

Designed for You

# MGISP-960

High-throughput Automated Sample Preparation System

## ●● User-defined

24-position board supporting multiple combinations of functional modules, and tailored workflows to satisfy each lab's needs and budget

## ●● Varied Applications

Applications appropriate for genomics, cell biology, drug discovery, protein science, analytical chemistry, etc.

## ●● Easy to Operate

Fully automated workflow and user-friendly interface with compatible reagents and software

## ●● Efficient & Accurate

96-channel pipettor with a robotic gripper to ensure high precision and reproducibility

## Introduction

### Automated

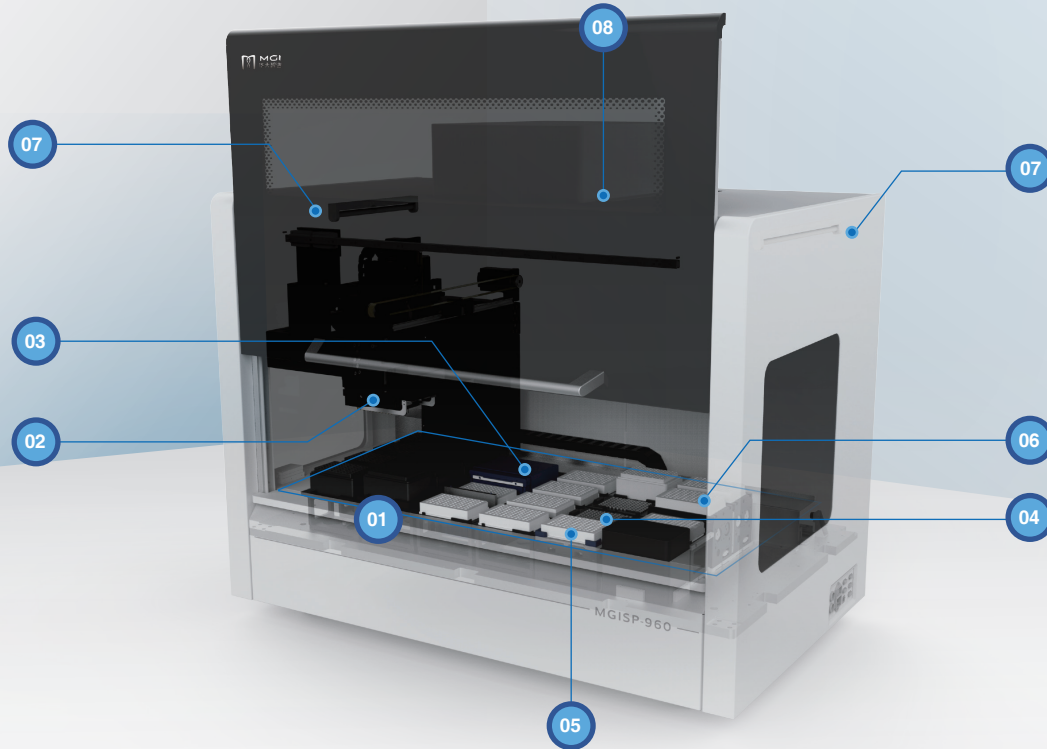
Full automation with built-in NGS sample-prep process, allowing one-stop operation of complex library procedures with minimal labor and maximized walkway time

### Flexible

8 to 96 samples handled during a run, supporting various sample types, and customized workflows

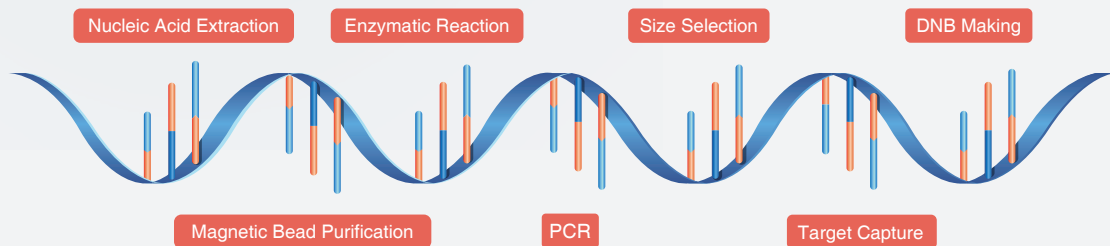
### Safe & Stable

Enhanced process control, ensuring traceable, reproducible, and high-quality libraries: closed-door workplace with UV light and a high-efficiency filter to protect samples from airborne particulates and aerosol contamination

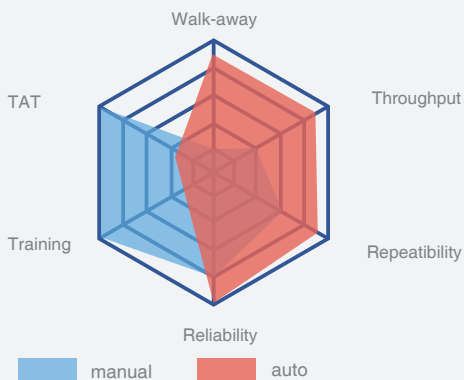


## Main Functions

> Replacing manual handling in:



## Advantages



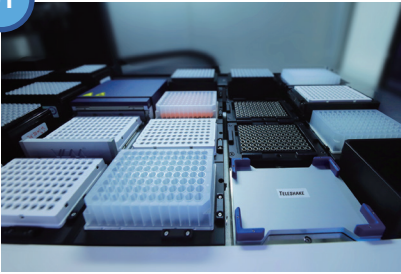
## Applications

- WGS
- Exome/ Target sequencing
- RNA/ Transcriptome sequencing
- NIPT
- PGS/PGD
- PMseq
- Tumor mutation gene detection (under development)
- Amplicon sequencing (under development)

\* The above applications are validated on the MGI sequencing platforms

## Product Composition

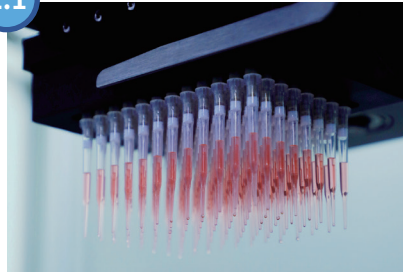
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### > Board

The standard board is an open platform for 24-position customization. It supports different module combinations such as the temperature control module, PCR, shaker, and magnetic beads purification module to meet the needs of each laboratory.

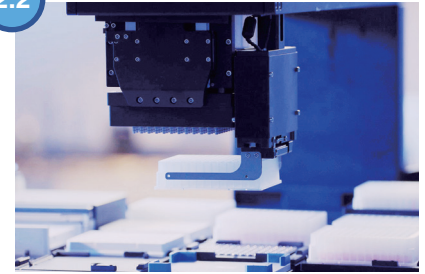
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### > 96-channel High-precision Robotic Arm

The Robotic Arm allows high-throughput processing of samples with precise positioning and rapid movement. The pipettor handles 8 to 96 samples at a time for efficient and flexible liquid handling.

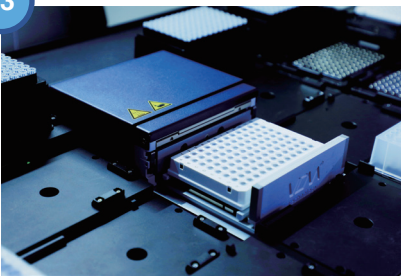
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### > Robotic Gripper

Robotic Gripper to provide flexibility with plate transfers and handling specified labware.

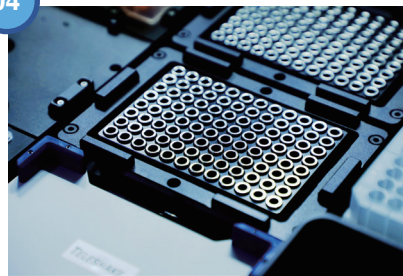
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### > PCR

The integrated PCR module provides fast and precise temperature control (4 - 99 °C) to ensure accurate reaction temperatures while connecting workflow between Pre and Post-PCR, minimizing manual interruption during the procedure.

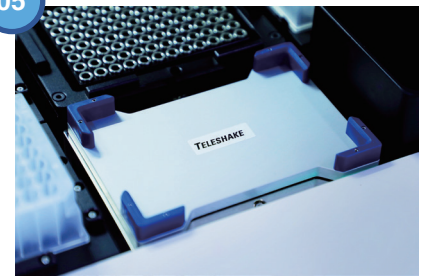
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### > Magnetic Beads Purification Module

The Purification Module has high magnetic field strength for rapid and efficient separation processes, enabling effective automated extraction and purification.

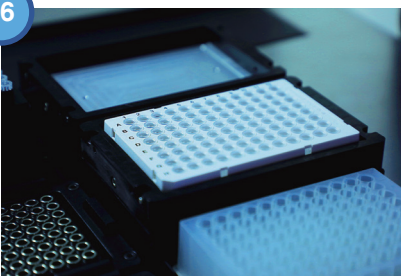
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### > Shaker

The Shaker has 6 mixing modes and is compatible with a variety of plate types. With a 100-2000 rpm rotation speed, it can mix the reagents and samples effectively and promote enzymatic reactions.

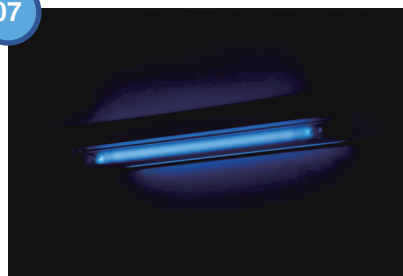
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### > Temperature Control Module

The Temperature Control Module helps to meet and maintain a required temperature, high or low, during sample preparation. It has a range of temperatures from 4-90°C for sample incubation and reagent storage.

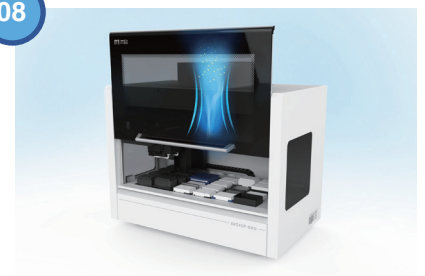
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### > UV Disinfection Lamp

The UV Lamp provides with ultraviolet disinfection before and after the experiment, keeping the environment inside the workstation clean, and effectively avoid the influence of pathogens and aerosols during the experiment.

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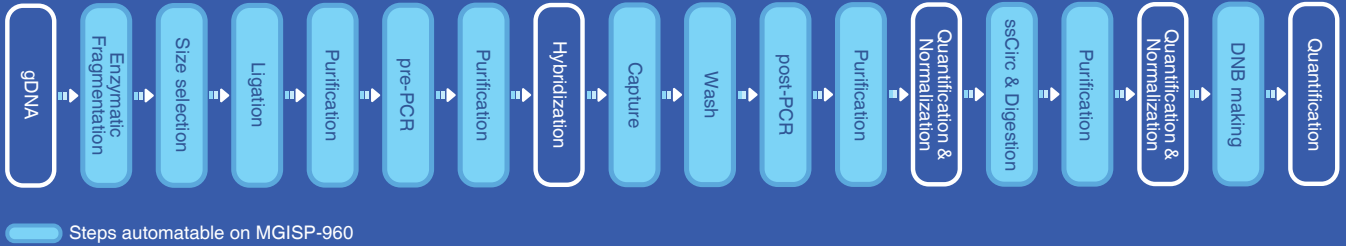
### > High Efficiency Filter: HEPA System

The HEPA system has a built-in ISO5 standard cleanroom fan Filter Unit, providing positive pressure to clean the inside workspace.

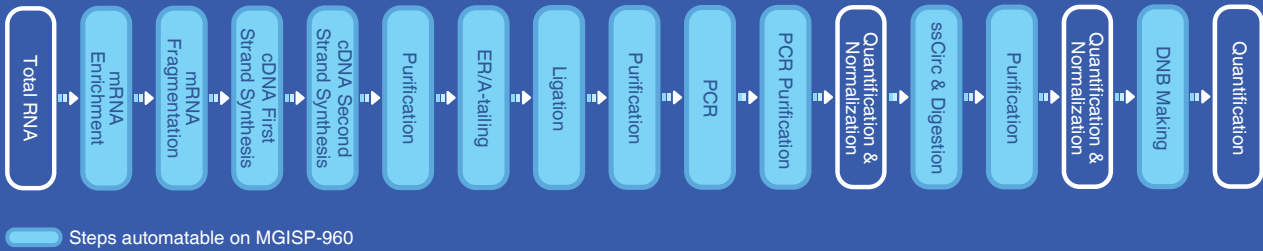
## Main Applications

**MGISP-960** can be used in a wide range of application fields. In the NGS field, it can help you automate most of the sample preparation process to suit your specific needs. Below are examples of WES, RNAseq, and Microbial detection sample preparation workflow.

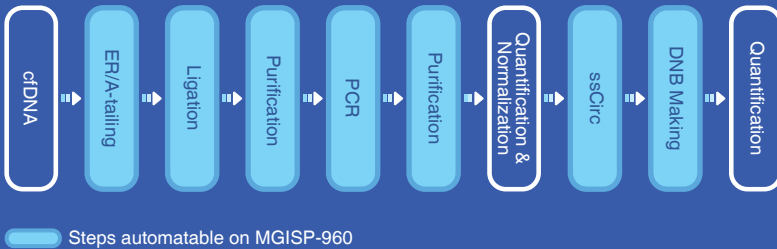
### WES Sample Preparation



### RNAseq Sample Preparation



### Microbial Detection Sample Preparation



## NGS Full Workflow Solution



### Samples

Plasma, saliva, FFPE, gDNA, WGA products etc.



### Sample Pretreatment & Preparation

Provides various sample preparation protocols, supports multiple library preparation strategies, and suitable for prefabricated library preparation kits



### Sequencing

Supports but not limited to sequencing systems such as BGISEQ, MGISEQ, etc



### Analysis Report

Localized Analysis Server; MegaBOLT Bioinformatics Analysis Accelerator; Cloud: BGI Online

## ► Specification

Throughput	96 samples per run		
Sample Type	plasma, saliva, FFPE, gDNA, WGA products etc.		
Pipette Range	2 ~ 200 $\mu$ l		
Pipette Accuracy	Volume	2 $\mu$ l	200 $\mu$ l
	CV	< 5%	< 1%
	Accuracy	< $\pm$ 10%	< $\pm$ 1%
Robot Arm Positioning Accuracy	$\pm$ 0.1mm		
Temperature Range	PCR	4 ~ 99 °C	
	Temperature Control Module	4 ~ 90 °C	
Temperature Accuracy	PCR	$\pm$ 0.3 °C at 55 °C	
	Temperature Control Module	$\pm$ 1 °C at 55 °C	
Temperature Uniformity	PCR	$\pm$ 0.2 °C at 72 °C	
	Temperature Control Module	$\pm$ 1 °C at 72 °C	
Working Environment	Temperature	19 °C ~ 25 °C	
	Humidity	20% RH ~ 80% RH, non-condensation	
	Air Pressure	80 kPa ~ 106 kPa	
	Highest Altitude	2000 m	
Power Requirements	Voltage	200 ~ 240 V, 50 / 60 Hz	
	Rated Power	the standard configuration - less than 2,000 VA	
Weight	250 kg		
Dimensions	1240*740*1110 mm		

## ► Ordering Information

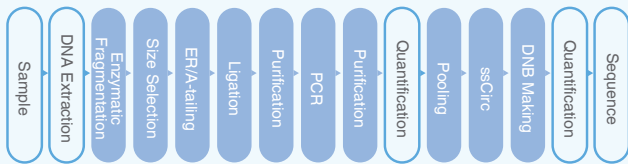
Model*	Intended Market	<p>*The standard configuration includes a PCR module, a magnetic frame, an oscillator, and a temperature control module. We provide multiple configurations available to suit most requirements. Please contact our sales representative(s) before ordering.</p> <p>** IVD models are currently unavailable for sale</p>
MGISP-960	China IVD**	
MGISP-960RS	China & Overseas RUO	
MGISP-960CX	Overseas IVD**	



## ► MGI Sample Preparation Systems

### MGISP-100 Automated Sample Preparation System

- **Features:** Fully-automated, standardized production, reproducibility, accuracy
- **Applications:** NIPT, PGS, WGS, rapid pathogen Identification, and more
- **Configurations:** 8-channel pipetting, 6-position board, 3 functional modules (PCR, magnetic beads purification module, temperature control module)

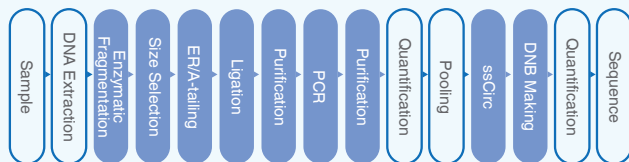


(WGS Sample Preparation)



### MGISP-960 High-throughput Automated Sample Preparation System

- **Features:** High-throughput, user-defined, fully-automated, highly-reproducible, accurate, custom-process-development
- **Applications:** NIPT, WGS, RNA, PGS/PGD, WES, targeted region sequencing, rapid pathogen identification, and more
- **Expandability:** Designed to meet all your high-throughput requirements in genomics, cell biology, drug discovery, protein science, analytical chemistry and more
- **Configurations:** 96-channel pipetting, customized 24-position board, 4 functional modules (PCR, magnetic beads purification module, temperature control module, shaker)



(WGS Sample Preparation)



## ► Technical Support and After-Sales Services

Global technical network to provide every customer with comprehensive system service and support:

- One-stop solution covering instrument installation, maintenance, repair, training and compliance services
- Flexible, on-demand script development seamlessly transforms your existing protocol into a fully automated workflow
- Maintenance service at our costs including labor, parts and travel expenses for failures caused by quality or design flaws during the warranty period
- A variety of extended warranty service plans that match your needs and budgets to maximize your instrument output

## ► Contact Us

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