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.

Easy to Operate

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

Varied Applications

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

Efficient & Accurate

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

MGI 华大智造

Introduction

Automated

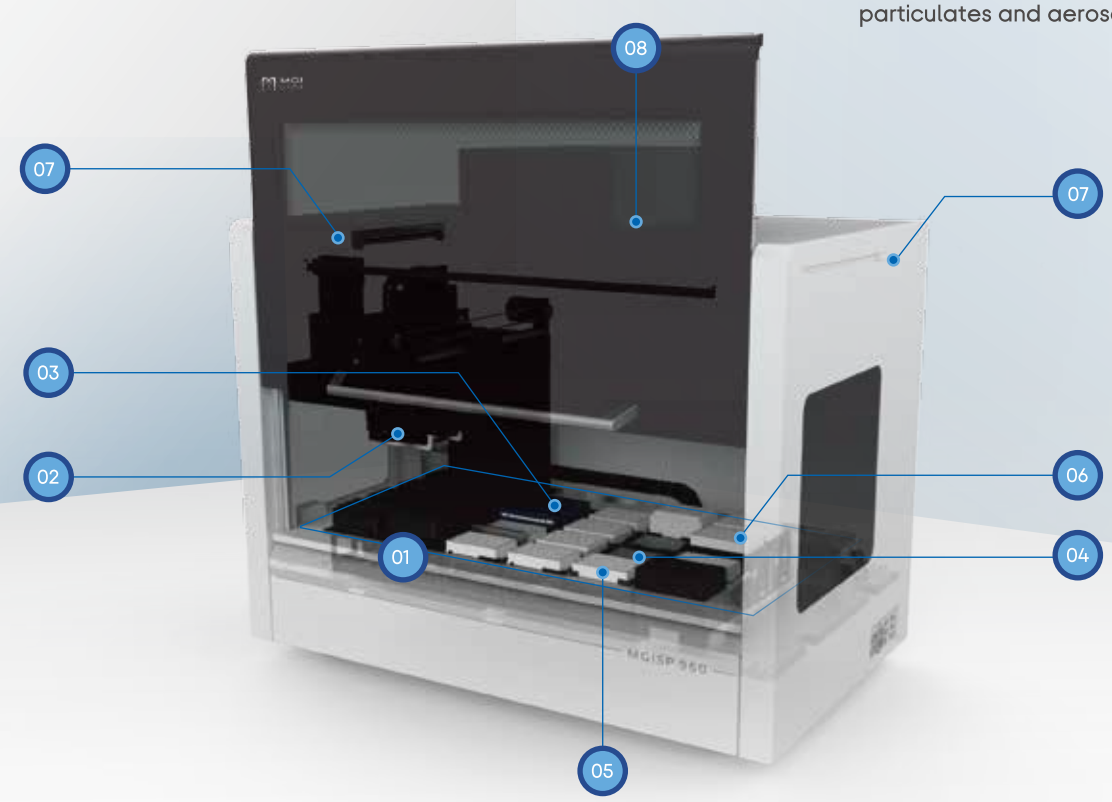
Full automation with built-in MPS sample-prep process, allowing one-stop operation of complex library procedures with minimal labor and maximized walkway time.

Flexible

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

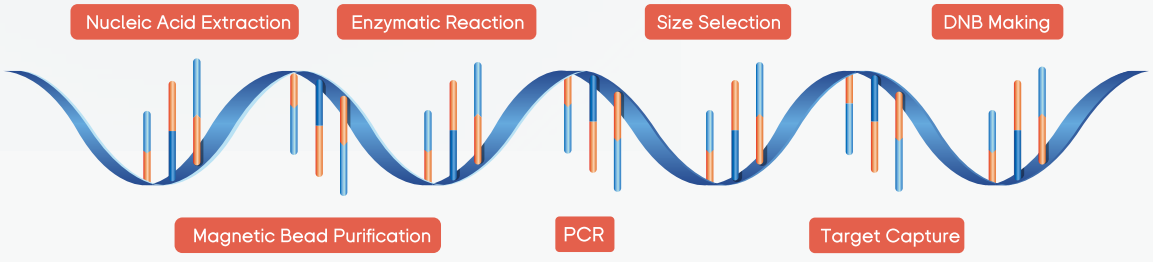
Safe & Stable

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

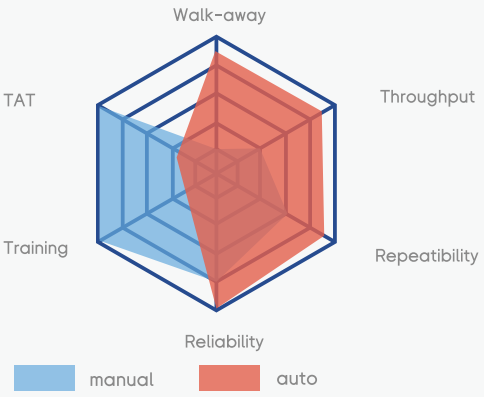


Main Functions

> 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

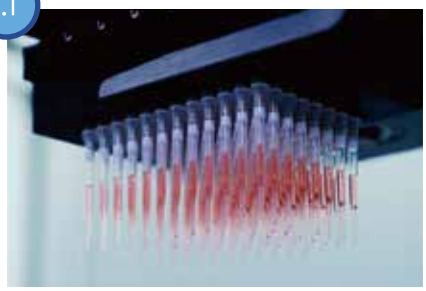
Product Composition

01

> 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.

2.1



> 96-channel High-precision Robotic Arm

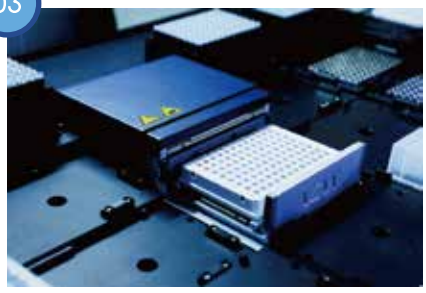
The Robotic Arm allows high-throughput processing of samples with precise positioning and rapid movement. The pipettor handles 8 to 96 samples at a time for efficient and flexible liquid handling.

2.2

> Robotic Gripper

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

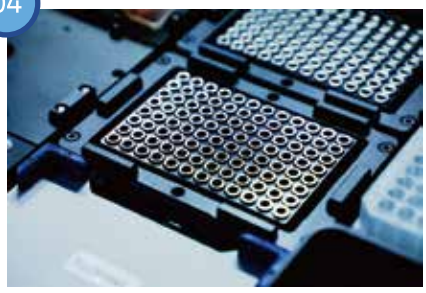
03



> PCR

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

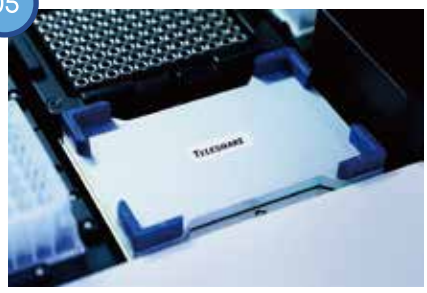
04



> Magnetic Beads Purification Module

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

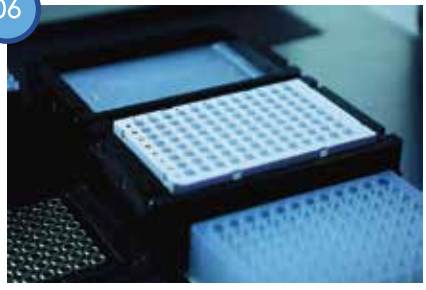
05



> 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.

06



> Temperature Control Module

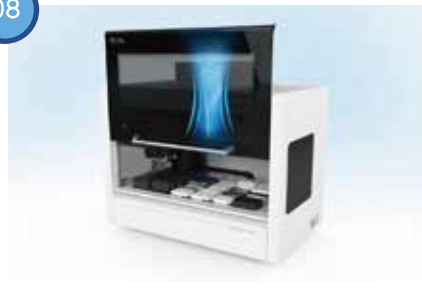
The Temperature Control Module helps to meet and maintain a required temperature, high or low, during sample preparation. It has a range of temperatures from 4~90℃ for sample incubation and reagent storage.

07

> 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.

08



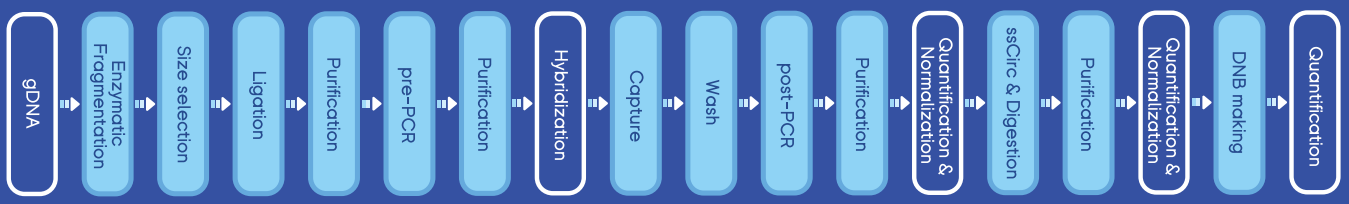
> High Efficiency Filter: HEPA System

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

Main Applications

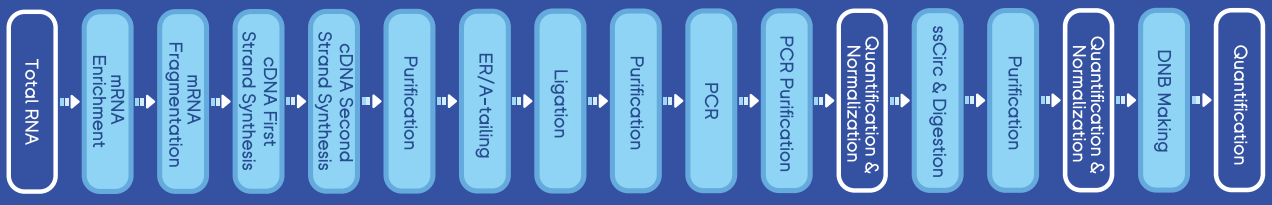
MGISP-960 can be used in a wide range of application fields. In the MPS field, it can help you automate most of the sample preparation process to suit your specific needs. Below are examples of WES, RNAseq, and Microbial detection sample preparation workflow.

> WES Sample Preparation



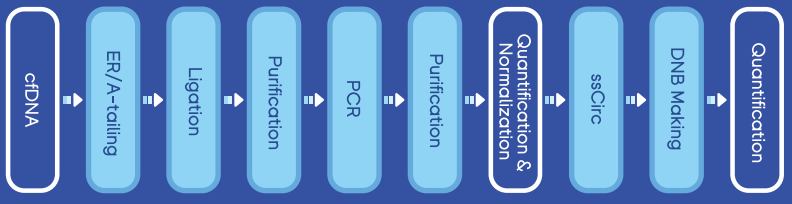
Steps automatable on MGISP-960

> RNAseq Sample Preparation



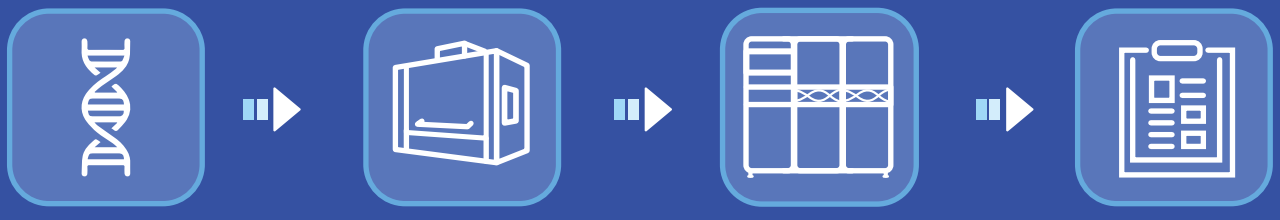
Steps automatable on MGISP-960

> cfDNA Sample Preparation



Steps automatable on MGISP-960

MPS 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 MGISEQ, etc.

Analysis Report

Localized Analysis Server; MegaBOLT Bioinformatics Analysis Accelerator.

▶ Specification

Throughput	96 samples per run		
Sample Type	plasma,saliva,FFPE,gDNA,WGA products etc.		
Pipette Range	2 ~ 200 μl		
Pipette Accuracy	Volume	2 μl	200 μl
	CV	< 5 %	< 1 %
	Accuracy	< ±10 %	< ±1 %
Robot Arm Positioning Accuracy	±0.1 mm		
Temperature Range	PCR	4 ~ 99 ℃	
	Temperature ControlModule	4 ~ 90 ℃	
Temperature Accuracy	PCR	±0.3 ℃ at 55 ℃	
	Temperature ControlModule	±1 ℃ at 55 ℃	
Temperature Uniformity	PCR	±0.2 ℃ at 72 ℃	
	Temperature ControlModule	±1 ℃ at 72 ℃	
Working Environment	Temperature	19 ℃ ~ 25 ℃	
	Humidity	20% RH ~ 80% RH, non-condensation	
	AirPressure	80 kPa ~ 106 kPa	
	Highest Altitude	2000 m	
Power Requirenments	Voltage	200~ 240 V， 50 / 60 Hz	
	RatedPower	the standardconfiguration- less than 2,000 VA	
Weight	250 kg		
Dimensions	1240*740*1110 mm		

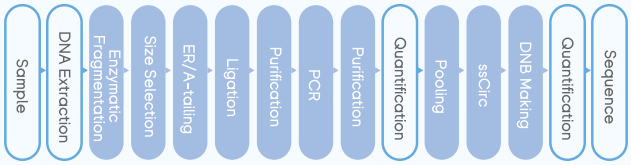
▶ Ordering Information

Model	IntendedMarket	
MGISP -960	China & Overseas IVD	The standard configuration includes a PCR module, a magnetic frame, a shaker, and a temperature control module. We provide multiple configurations available to suit most requirements. Please contact our sales representative(s) before ordering.
MGISP -960RS	China & Overseas RUO	

▶ MGI Sample Preparation Systems

MGISP-100 Automated Sample Preparation System

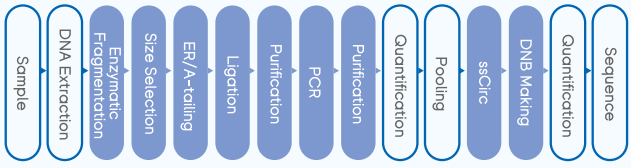
- Features: Fully-automated, standardized production, reproducibility, accuracy
- Applications: NIPT, PGS, WGS, rapid pathogen Identification, and more
- Configurations: 8-channel pipetting, 6-position board, 3 functional modules (PCR, magnetic beads purification module, temperature control module)



(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

MGI Tech Co,. Ltd
Address: General Building, Beishan Industrial Zone, Yantian District, Shenzhen, CHINA (518083)
Email: MGI-services@genomics.cn
Linkedin: www.linkedin.com/company/mgi-bgi
Twitter: @MGI_BGI
Website: en.mgitech.cn
Tel: (+86) 4000-966-988

Version: June 2020

Official Wechat

Official Website

▶ Copyright Disclaimer