Marge

Provide cutting-edge medical technology services

Marge is a pioneer in the precision cleaning of medical devices. We are committed to helping endoscopy centers and disinfection supply centers (CSSDS) solve the challenges of in hospital infection control safety, cleaning and disinfection quality safety, and device operation efficiency. We provide comprehensive solutions for precision cleaning and disinfection to reduce the risk of secondary pollution and hospital cross infection, and help the medical and health industry to improve operational efficiency and treatment effect.

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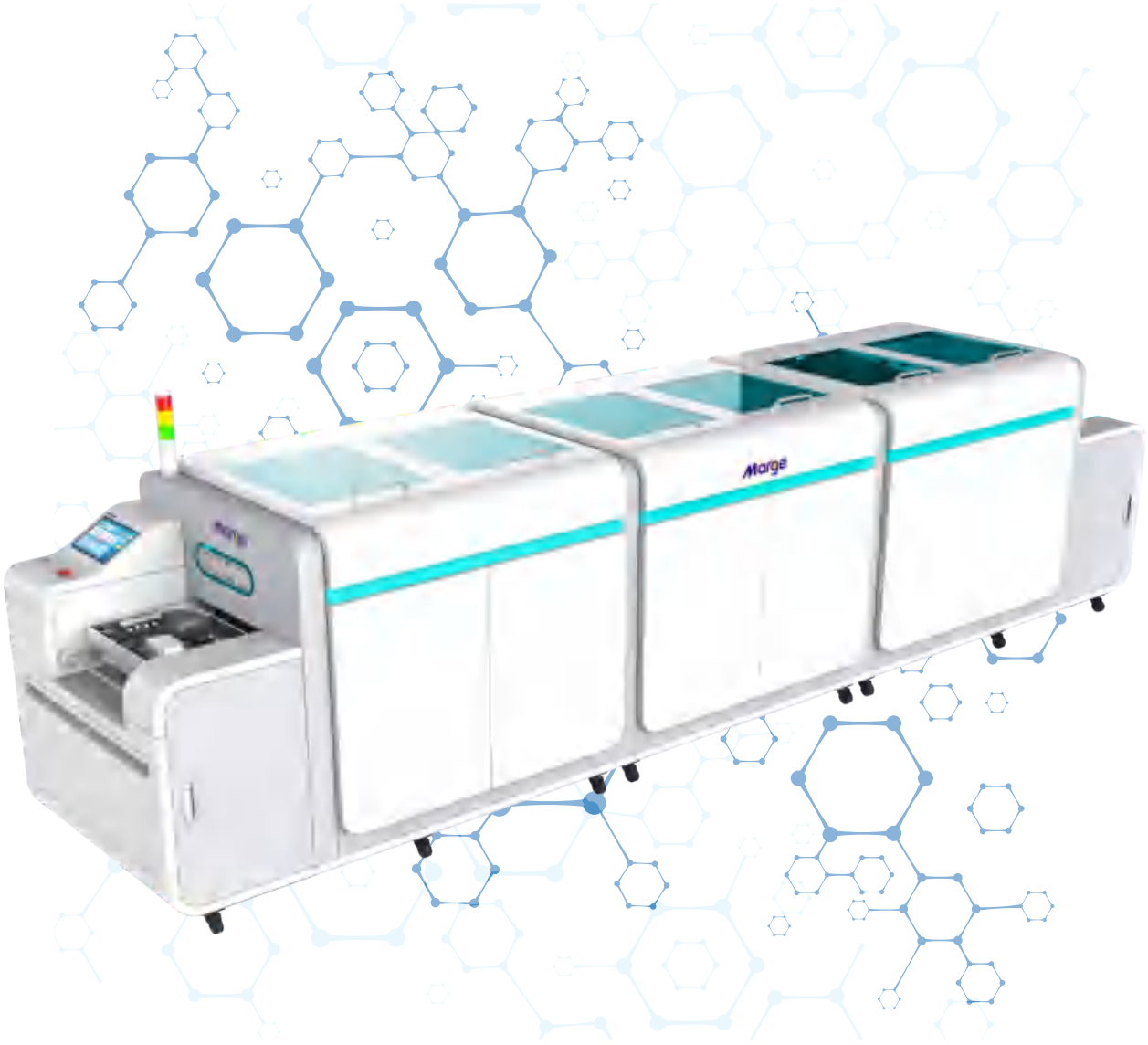
# Hospital endoscopy center cleaning and disinfection products

## ENDOSCOPE CLEANING WORKSTATION




SHENZHEN MARGE TECHNOLOGY SHARING CO.,LTD.

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# COMPANY PROFILE

Shenzhen Marge Technology Sharing Co., Ltd. is specialized in medical cleaning equipment, endoscopic cleaning and disinfection equipment, medical pure water equipment, medical drying equipment, medical cleaning agent and medical disinfectant and other medical sensory control products research and development, manufacturing, marketing and service in one of the high-tech enterprises. Relying on the parent company Keweida collection, our group more than 20 years of precision cleaning experience, the company now has more than 80 medical cleaning patent technology, the products sold have been highly recognized and praised by the majority of users.

A literature review of records involving endoscopy-associated infections during the period 1966-2020 shows that the causes of infection are basically attributed to improper cleaning procedures, improper use of chemical disinfectants, and inadequate drying procedures. Therefore, the endoscope is clear; Washing and disinfection is an important link in the prevention and control of hospital infection. The cleaning and disinfection of endoscopes is developing from manual operation to whole-process machine operation.

# Automatic endoscopic cleaning and disinfecting machine (single/double chamber)

## Product structure:

- Mainly by pure white and sky blue two tone group war, the appearance is simple and fashionable, in line with the overall style of modern hospital;
- The product has been designed by ergonomic calculation, specially considering that the current users are mostly women, so the product is very close to the needs of actual users.
- Using separate key panel, the commonly used keys and unusual keys are designed separately to avoid wrong operation;
- Double liquid level switch design, to prevent the failure of a liquid level, resulting in water waste;
- The tank body is made of new ABS composite material by 800 tons injection molding machine, which is strong and durable.
- The internal chamber of the tank body is designed according to the structure of the endoscope body to facilitate drainage and save disinfectants and cleaning agents to a greater extent. - The contact surface of the endoscope body has concave and convex vertical stripes to ensure the maximum cleaning and disinfection effect of the lens body.

## High frequency precision ultrasonic cleaning features:

- All covered, all pervasive, precision cleaning. It can clean all the folds and crevices on the surface of the endoscope and all the parts that can be infiltrated by water.

## Work principle

Using ultrasonic "cavitation effect", the endoscope was thoroughly cleaned

## Full soaking

- Full coverage, full pipe cleaning and disinfection
- The cleaning solution and disinfectant are applied to the outer surface of the endoscope, the inner cavity, the inner body of the tank and the cover.

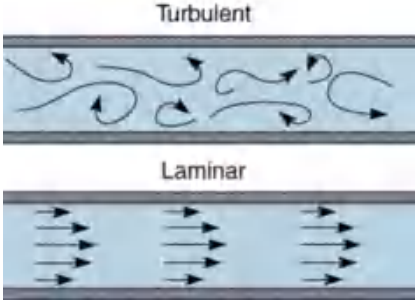
## High-frequency precision ultrasonic cleaning (internal and external cleaning)

High-frequency precision ultrasonic cleaning covers all, omnipresent, precision cleaning. It can clean all the folds and crevices on the surface of the endoscope and all the parts that can be infiltrated by water.

Imported ultrasonic transducer

## Air liquid mixed flow perfusion cleaning (internal cleaning)

After high pressure gaseous fluid is mixed with a liquid fluid, the droplets formed by high pressure gas and cleaning liquid are ejected at high speed through a special supersonic nozzle to achieve better internal perfusion cleaning effect of the endoscope.



# Automatic endoscope cleaning and disinfecting machine (single chamber)

1.Full soaking
2. Strong fan shaped rotated spray cleaning with nozzle(External Cleaning)
3. High frequency precision ultrasonic cleaning (Internal and External Cleaning)
4. Gas liquid mixture perfusion cleaning (Internal cleaning)

it can be transact 2 set of endoscopes at once synchronously

## Technology parameters

| Model | G–16 |
|---|---|
| Cleaning sink QTY | 1 |
| Endoscope cleaning& disinfection QTY/times | 1 |
| Disinfection agent tank capacity | 12L |
| Enzyme agent tank capacity | 1.7L |
| Alcohol agent tank capacity | 1.7L |
| Disinfection agent capacity | 10L |
| Alarm function of endoscope joint falling off and endoscope lumen clogging | optional |
| Tablet PC | non |
| Running noise | ⩽65dB |
| Disinfectant of choice | Glutaraldehyde, phthalaldehyde, acid oxidizing potential water |
| Disinfectant, disinfection temperature and disinfection time | Glutaraldehyde: When the temperature is set at 43℃, the whole process is ≥10min; When the temperature is set at 23 ° C, the whole process is ≥18min Phthalaldehyde: When the temperature is set at 23℃, the whole process is ≥10min; Peroxyacetic acid,Acidic oxidation potential water: at room temperature, the whole process is 10min; |
| Traceability system (optional) | 1, the machine automatically identifies the endoscope encoding and records the whole process of decontamination information<br>2, the machine automatically identifies and cancels the operator information |

# Automatic endoscope cleaning and disinfecting machine (double chamber)

1. Soak completely
2. Power fan nozzle Rotary spray cleaning (external cleaning)
3. high-frequency precision ultrasonic cleaning (Internal and external cleaning)
3. high-frequency precision ultrasonic cleaning (Internal and external cleaning)
4. Air liquid mixed flow perfusion cleaning (internal cleaning)
4. Air liquid mixed flow perfusion cleaning (internal cleaning)

Can handle two endoscopes at a time

## Technology parameters

| Model | G–16–A |
|---|---|
| Cleaning sink QTY | 2 |
| Endoscope cleaning& disinfection QTY/times | 2 |
| Disinfection agent tank capacity | 24L |
| Enzyme agent tank capacity | 3L |
| Alcohol agent tank capacity | 3L |
| Disinfection agent capacity | 20L |
| Alarm function of endoscope joint falling off and endoscope lumen clogging | Have |
| Tablet PC | optional |
| Running noise | ≤75dB |
| Disinfectant of choice | Dialdehyde, phthalic aldehyde, acid oxidizing potential water, peroxyacetic acid |
| Disinfectant, disinfection temperature and disinfection time | Glutaraldehyde: When the temperature is set at 43℃, the whole process is ≥10min; When the temperature is set at 23 ° C, the whole process is ≥18min<br>Phthalaldehyde: When the temperature is set at 23℃, the whole process is ≥10min;<br>Peroxyacetic acid,Acidic oxidation potential water: at room temperature, the whole process is 10min; |
| Traceability system (optional) | 1, the machine automatically identifies the endoscope encoding and records the whole process of decontamination information<br>2, the machine automatically identifies and cancels the operator information |

# Automatic endoscopic cleaning and disinfection machine

## Endoscopic treatment conforms to the standard specification to ensure the quality of cleaning and disinfection

Endoscopic cleaning and disinfection work has been included in medical quality management, therefore, the quality of endoscopic cleaning and disinfection is very important. How to effectively prevent staff and patients from being infected has become an important work content in hospitals.

### Gastrointestinal disease prevention of infection

Literature review of endoscopy-associated infections from 1966 to 2020 showed that the causes of infection were basically attributed to non-standard cleaning procedures, improper use of chemical disinfectants, and inadequate drying procedures. Therefore, the cleaning and disinfection of endoscope is an important link in the prevention and control of hospital infection. The cleaning and disinfection of endoscope is developing from manual operation to whole-process machine operation.

### High quality cleaning capability

As a professional supplier in the field of sensing control, Marge has developed an efficient MAG-RJ305 automatic endoscope cleaning and disinfection machine based on the actual situation of hospitals and a large number of tests conducted by the company's laboratory over the years. One flexible endoscope is processed in each batch and the high rate of pre-washing, enzyme washing, rinsing, disinfection, terminal rinsing and drying is achieved in 6 stages. MAG-RJ305 fully complies with GB30689-2014 specification.

Leakage test > Enzyme cleaning > Rinses > Disinfection > End Rinses > Alcohol dry

## Technology parameter

Overall size:4350*960*1160mm

Operation height:910mm

Conveyance method :Equal pace conveyance

Ultrasonic frequency :1KW  120KHz

Total power :38KW

Purified water :68L/Cycle

Power supply:AC380V 3 phase in 5 wires

Work cycle: First blasket 30 mins, follow 6mins/blasket(self-set according to the disinfection agent)

Power supply: Thermal sensitive printer,  Roll paper 80*Φ50mm

Applicable disinfectant: phthalaldehyde, peracetic acid, glutaraldehyde

Self-disinfection: After the end of work every day, the equipment has its own disinfection function to ensure that the equipment is always in a clean state.

# We provide the most incredible guarantee for life

| Function | Manual cleaning disinfection agent | **MAG-RJ305** |
|---|---|---|
| Orifice Translumenal management | No guarantee | Yes, the effect is good |
| Process standardization & consistency | No guarantee | Stable, Automatic work |
| Complete Immersion disinfection | Conform to | Conform to |
| Sterile water generation system | Non | Yes |
| Cleaning and disinfection equipment disinfection | No guarantee | Self-disinfection |
| Disinfection agent management capability | Non | Excellent |
| Manual injection/discharge disinfection agent | Yes | Automatic work, hand off operation |
| Data record of cleaning and disinfection | Hand record | Automatic storage printing data |
| Accurate water air pressure control | No guarantee | Yes |
| Detection leakage of endoscope | Manual work | Yes |

# Unique handling capability ensures cleaning quality

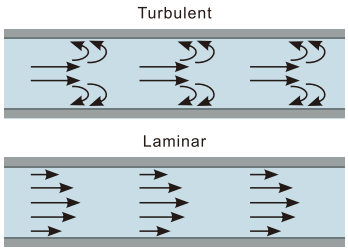
Marge top priority is to protect our patients and staff. We control the entire process through our unique cleaning technology to ensure the quality of cleaning.

## Powerful fanshaped nozzle rotary spray cleaning

MAG-RJ305 spray arm adopts non-power water cutting rotary spray device, fan type spray, 360 degrees without dead Angle, to ensure the spray cleaning pressure and cleaning range. And the spray arm is removable, easy to maintain and clean.

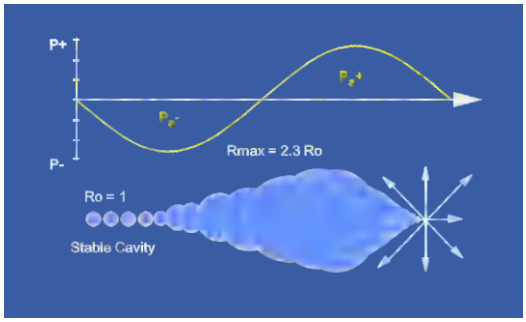
## Gas-liquid mixed flow perfusion cleaning

MAG-RJ305 uses a supersonic nozzle to spray droplets formed by high pressure gas and cleaning liquid into the interior of the endoscope at a high speed, forming strong scouring and achieving effective cleaning effect.




## High-frequency precision ultrasonic cleaning

MAG-RJ305 uses high frequency precision ultrasound to cover all parts of the endoscope, which can be penetrated by precision cleaning. It can clean all folds and crevices on the surface of the endoscope and all parts that can be infiltrated by water.




## Precision rinses

MAG-RJ305 adopts upper and lower layers of spray cleaning and gas-liquid mixed perfusion in the pipe to ensure clean.
Before delivery to the disinfection cabin, the endoscope cleaning basket is given strong wind to fully blow away the water outside and inside the endoscope, so as to reduce the transfer of rinsing water into the disinfectant.

## High quality cleaning power

As a professional supplier in the field of sensory control, "Marge" has developed an efficient MAG-Rj305 automatic endoscope cleaning and disinfecting machine based on many years of actual hospital conditions and a large number of tests in the company's laboratory. With one flexible endoscope processed in each batch and six stages to achieve a high rate of pre-washing, enzyme washing, rinsing, disinfection, terminal rinsing and drying, MAG-RJ305 fully complies with Gb30689-2014 specifications.

## Perfect application

MAG-RJ305 is suitable for the treatment of soft endoscopes such as gastroscopy, colonoscopy and bronchoscopy, while the entire process is completed in complete closure, reducing the risk of infection in the operator.

## Simple and convenient

Color touch screen operation, just press a key to run the corresponding program. Data acquisition, storage, can realize the data port opening.

## Data storage and monitoring

The working data has the printing function, and the data can be stored in MAG-RJ305 for more than 3 years.

## Innovative design

The MAG-RJ305 outer sealing plate is made of high quality composite material, and the tank body is made of high quality PP board imported from Germany. There are transparent observation Windows and movable doors around the equipment, making installation and maintenance of internal components easy.

# We strive to provide hospitals with the most efficient safeguard

## Final rinsing

In order to ensure the final rinsing effect, the purified water needed is purified water after sterilization to prevent the re-contamination of the endoscope.

## High turnover rate

MAG-RJ305 processes 1 endoscope every 6 minutes, which has a fast turnover, improves the amount of operation in the department, reduces the number of endoscopes purchased, and reduces the cost.

## Effective dry

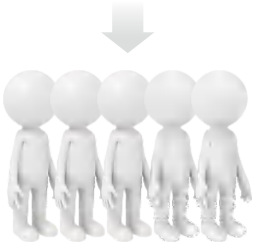
A small amount of alcohol was sprayed by endoscope and a small amount of alcohol was injected into the lumen. And the use of high - efficiency high - pressure fan and high - precision air filter to transmit temperature air, truly realize drying.

High pressure large flow blower

High precision filter

## 100 operations a day

Number of people required to manually process endoscopy



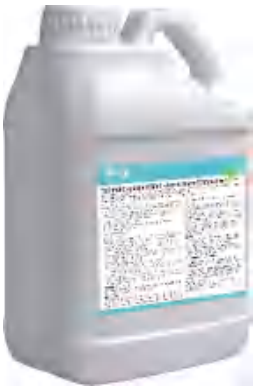
Number of people required to MAG-RJ305 process endoscopy

# Endoscopic cleaner

According to the <<Hygienic Requirements for automatic cleaning and disinfection machine for Endoscopes>>, Marge independently develops and produces cleaning agents to achieve the safest guarantee.

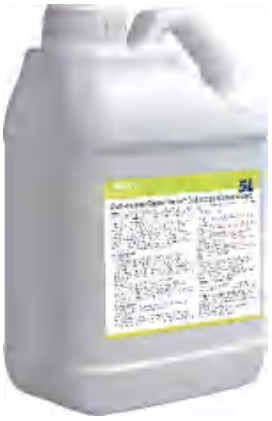
## Multi-enzyme cleaner for Soft endoscopy (Gastroscope)

- The product adopts a composite formula of strong protease, lipase, pectinase, amylase, cellulase and other biological linase stabilizers, which is suitable for manual, ultrasonic and automatic cleaning of the gastroscope, without harming the gastroscope and various plastic, rubber and other accessories.
- Contains a variety of biological enzymes, fast decomposition of dirt
- Low bubble formula, easy to rinse 100% biodegradable, no residue, efficient and environmentally friendly
- PH value is 6.5 to 7.5, no corrosion to the instrument, no harm to the human body.



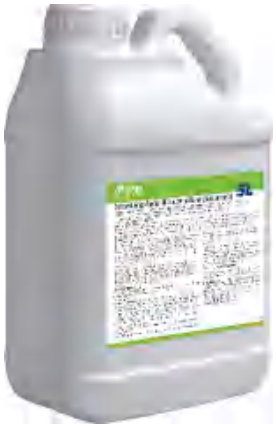
## Multi-enzyme cleaner for Soft endoscopy (Colonoscope)

- The product adopts a composite formula of strong protease, lipase, pectinase, amylase, cellulase and other biological linase stabilizers, which is suitable for manual, ultrasonic and automatic cleaning of the gastroscope, without harming the gastroscope and various plastic, rubber and other accessories.
- Contains a variety of biological enzymes, fast decomposition of dirt
- Low bubble formula, easy to rinse 100% biodegradable, no residue, efficient and environmentally friendly
- PH value is 6.5 to 7.5, no corrosion to the instrument, no harm to the human body.




## Multi-enzyme cleaner for Soft endoscopy (Bronchscope)

- The product adopts a composite formula of strong protease, lipase, pectinase, amylase, cellulase and other biological linase stabilizers, which is suitable for manual, ultrasonic and automatic cleaning of the gastroscope, without harming the gastroscope and various plastic, rubber and other accessories.
- Contains a variety of biological enzymes, fast decomposition of dirt
- Low bubble formula, easy to rinse 100% biodegradable, no residue, efficient and environmentally friendly
- PH value is 6.5 to 7.5, no corrosion to the instrument, no harm to the human body.



# Endoscopic disinfectant

According to the <<Hygienic Requirements for Endoscope Automatic cleaning and disinfection machine>>, Marge independently develops and produces disinfectant to achieve the safest guarantee.

## Phthalaldehyde disinfectant

- Product with peracetic acid as the main active component of the one-unit package disinfectant, peracetic acid content of 0.24%±0.036% (w/v).
- It is mainly used for endoscope automatic cleaning and disinfection machine and manual way for high-level disinfection and sterilization of endoscopes, and can be used for high-level disinfection and sterilization of heat-resistant medical instruments (acid-resistant items).

## Peracetic acid disinfectant

- The product is a disinfectant with glutaraldehyde as the main active ingredient, and the content of glutaraldehyde is 2.0%-2.5%
- Suitable for immersion disinfection and sterilization of various medical instruments.

## Glutaraldehyde disinfectant

- Main ingredients: phthalaldehyde concentration 0.55%±0.05%.
- Scope of use: Suitable for high-level disinfection of medical instruments, mainly with endoscope cleaning machine for high-level disinfection of endoscopes.

# Endoscopic cleaning workstation

- The front and back of the backplane and the lighting box are all produced in one injection molding, without glass fiber reinforcement, the appearance of the front and back are smooth, seamless docking, no glass glue, is a whole plastic part, non-corrosion, collision resistance.

## Automatic perfusion device:

The control system makes the dispenser completely automatic and reduces manual labor and human error. Embedded installation, integrated chip design, stable operation; Touch button, does not occupy operating space, long service life, easy to clean.

## Compressed narrow air essence system

Medical endoscope cleaning and disinfection equipment domestic design, compressed air purification system, cleanliness ≤0.01um, meet and better than the national requirements.

## Electronic sewage discharge system

Medical endoscope cleaning and disinfection equipment is equipped with a professional electronic drainage system to reduce the operator's exposure to chemical agents and protect the safety of the operator.

## Enzyme liquid automatic proportioning system

Medical endoscope cleaning and disinfection equipment can be equipped with professional enzyme liquid automatic matching function, only the medical staff according to the need to set the enzyme liquid ratio and solution amount in advance, just press the button to automatically generate the required proportion of enzyme solution.

## Cleaning tank design

Designed large cleaning tank, with professional overflow, to prevent liquid overflowing; Two endoscopes can be cleaned simultaneously.

# Acid oxidation potential water generator

## Product feature

- Efficient sterilization: completed within 1min.
- Environmental protection and non-toxic: Raw materials are easy to obtain, low concentration of effective chlorine ensures no pollution to the atmosphere and water, and can decompose into sodium chloride within 3 natural days..
- The main body of the equipment is durable, beautiful and generous, with acid and alkali resistance, corrosion and moisture resistance. The electrolytic cell is composed of ion diaphragm imported from Japan and platinum metal electrode
- With high water volume (≥2L/min), and can realize the automatic reverse pole cleaning function, no manual regular cleaning, easy maintenance. With a variety of precision sensors.
- Automatic monitoring of acidic oxidation potential water storage tank can record, store and print the physical and chemical indicators of effluent in real time
- Lack of salt alarm function, low inlet pressure, insufficient flow alarm.

# From the international new upgrade

High electrolytic efficiency

Non-toxic and environmentally friendly

Off duty

Data record query

24h long-term runing

Imported eletrolysis sink

# Endoscopic transport trolley

With double-layer design, clean and contaminated endoscopes can be marked and placed in layers during use to improve turnover efficiency and avoid cross infection.

The shipping tray is made of polymer composite material independently opened mold; It is equipped with an anti-fouling cover made of transparent PMMA material

The car body is made of rigid body spray molding, the surface is smooth, there is no disinfection dead Angle, and it has the advantages of corrosion resistance, non-wetting, smooth running, convenient taking and putting

The endoscopic navigation spacer in the disk separates contaminated and non-contaminated parts to avoid the risk of infection.

## Robot transfer trolley

- Positioning and navigation: LiDAR indoor positioning, navigation and obstacle avoidance
- Display: 7 inch TFT display; Capacitive full touch panel; Resolution 1024*600 with voice playback function
- With voice playback function
- With wifi connetion function
- Travel speed :0.1-1.2m/s adjustable
- Charging mode: manual and automatic charging mode
- Cell work duration: over 12 H

Robot transfer trolley

Endoscopic transport trolley

# Endoscopic storage cabinet

Made of high quality stainless steel, the surface is smooth and delicate, strong and durable, and does not wear the surface of the mirror body and its accessory parts. The interior adopts stainless steel inner liner and separated partition type storage bin, which can effectively clean and sterilize and prevent secondary pollution.

The product is widely used in hospital gastroenteroscopy room, bronchoscope room, cystoscope room, choledochoscope room, operating room, stomatology department. Storage of various soft and hard endoscopes and other surgical, examination and therapeutic instruments used in laryngoscope room, disinfection and supply center, etc.

Intelligent endoscopic storage cabinet (Single door)

Intelligent endoscopic storage cabinet (Double door)

| | | | | | | |
|---|---|---|---|---|---|---|
| The inner wall is made of high-quality stainless steel, which does not hide dirt and is easy to clean | With two separate chamber, it can work independently | Large transparent viewing window for easy observation of endoscope storage | Built-in intelligent control program, one-click start, easy to operate | Built-in high efficiency air filter and automatic control of UV circulating air disinfection system | Automatic accumulation of disinfection time, real-time monitoring of the temperature and humidity in the cabinet | With lighting and constant temperature drying and vacuum function |

| Model | MAG-CC80(Single door) | MAG-CC80(Double door) |
|---|---|---|
| Overall size | 700*470*1680mm | 1280*650*1750mm |
| Inner sink size | 435*360*1160mm | 355*440*1160mm |
| Storage method | Tray 8 Layers | Tray 8 Layers*2 |
| Power supply | 220V 50Hz | 220V 50Hz |
| Power | 1KW | 1.5KW |
| Disinfection method | Ultraviolet circulating air | Ultraviolet circulating air |
| Control method | Microcomputer + color touch screen | Microcomputer + color touch screen |