

Potent® 普东医疗



POTENT • New Summit of Medical Tech

# SURGICAL HOLMIUM LASER

## ABOUT US CONTENTS

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INTERNATIONAL ORGANIZATION  
FOR STANDARDIZATION  
ISO13485

THE HZ SERIES

# CERTIFICATES



CFDA



FSC



ISO13485



CE



IEC60601



National High-tech Enterprise



National Key Products



Leading Patents-1



Leading Patents-2



Leading Patents-3

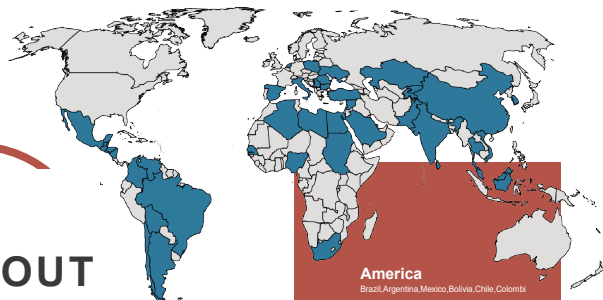


Leading Patents-4

# ABOUT POTENT

Market share leader of medical laser  
therapeutic instrument

Potent Medical Equipment Joint-Stock Co., Ltd. is located on 5th Floor, C2 Building, NO. 11, Kaiyuan Road, Science City, High-tech Industrial Development District, Guangzhou, China, specializing in the R&D, manufacturing and marketing of Medical laser therapeutic apparatus, Patient lift system and Optoelectronic medical Equipments. The self-developed "Holmium Laser System" ranks in leading edge in the Chinese market occupancy been stably supplied to over 45 countries for over 15 years. Also, Potent has been manufacturing and marketing "Patient Lift System" over 5000 units in the domestic market and global market every year, and



## America

Brazil, Argentina, Mexico, Bolivia, Chile, Colombia, Salvador, Ecuador, Peru, Guatemala etc.

## Europe

Spain, France, Russia, Ireland, Ukraine, Denmark, Netherlands, Poland, Romania, Bulgaria, Albania, Armenia, Moldova etc.

## Africa

South Africa, Nigeria, Sudan, Ethiopia, Kenya, Tanzania, Senegal, Côte d'Ivoire, Zambia etc.

## Asia

China, Japan, India, Korea, Singapore, Malaysia, Vietnam, Indonesia, Philippines, Thailand, Pakistan, Uzbekistan, Nepal, Tajikistan, Kazakhstan, Bangladesh, Azerbaijan etc.

## The Middle East

Turkey, United Arab Emirates, Saudi Arabia, Qatar, Yemen, Iraq, Bahrain, Jordan, Syria, Iran, Egypt, Lebanon, Morocco, Algeria etc.

## Development History

- 2004 Established
- 2008 CFDA
- 2009 ISO13485
- 2010 National High-tech Enterprise
- 2011 CE
- 2012 Identified as "Key Products" by Ministry of Science and Technology of China
- 2016 Enterprise of Observing Contract and Valuing Credit
- 2017 Medical Laser Equipments Engineering Technology R&D Center
- 2019 Registration certificate of medical fiber and plasma sterilizer
- 2021 Update the holmium laser registration certificate

# POTENT MEDICAL HOLMIUM LASER



## “Dual-insurance” Laser

Two cavities work design; two beams of laser can work together or separately. When an error occurs in one beam output, the other one assures the operation going smoothly.

## Unique Sealing Techniques Patent

Built-in well-sealed cavity. It is anti-shock, anti-humidity, anti-dust, anti-interference of electromagnetic wave, it ensures long-term steadiness of laser output and lifespan of laser cavity.

## Imported Core Parts (From USA and Germany)

Through EMC test, imported core accessories enhance holmium laser output stability and efficiency of transformation, which provides reliable security assurance while assuring high power, super stability and long-term use.

Sound-mute Environment friendly  
Water Cooling System, high efficiency, long time use

0.1μ step-length adjustment,  
wide-range alternative Energy  
feedback of loop control system

Highest monopulse energy can  
achieve 4.5J and highest  
frequency is 40Hz, which  
shortens operation time and  
increases surgery efficiency.

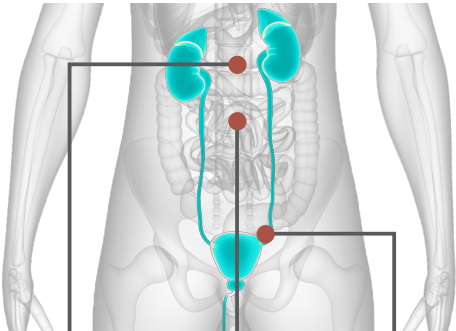
Color touch LCD with big screen,  
easy to manipulate. Clear  
direction light, blue and  
adjustable. Varieties of optical  
fiber specifications: 200μm, 275  
μm, 365μm, 550μm, 800μm,  
1000μm. Intellectualized memory  
function, automatically resumes  
default setting, no need to set  
regularly.




## TECHNICAL DATA

|                     |   |                |                 |                 |
|---------------------|---|----------------|-----------------|-----------------|
| Output Power (max.) | 40Watts,                                      | 60Watts,       | 80Watts,        | 90Watts,        |
| Pulse frequency     | 5-20 Hz                                       | 5-40 Hz        | 5-40 Hz         | 5-40 Hz         |
| Pulse energy        | 0.5-4.0 J                                     | 0.1-4.0J       | 0.1-4.5J        | 0.1-4.5J        |
| Laser type          | Holmium laser (Ho:YAG)                        |                |                 |                 |
| Wavelength          | 2.1μm   |                |                 |                 |
| Pulse duration      | 300-600μs                                     |                |                 |                 |
| Aiming beam,green   | Green 532nm,<1mW,can be fine-tuned            |                |                 |                 |
| Cooling system      | Internal cooling system                       |                |                 |                 |
| Fibers              | Reusable 200μm,275μm,365μm,550μm,800μm,1000μm |                |                 |                 |
| Main supply         | AC 220V-240V/50Hz-60Hz single phase           |                |                 |                 |
| Dimensions (width)  | 89cm*45cm*90cm                                | 89cm*45cm*90cm | 89cm*45cm*105cm | 89cm*45cm*105cm |
| Weight              | 110kg   | 135kg          | 150kg           | 160kg           |









**GASTROENT-  
EROLOGY**

Gastric cancer, Early digestive  
system cancer, Esophageal  
stenosis, Upper gastrointestinal  
polyps.



**GENERAL  
SURGERY**

Common bile duct stones



**UROLOGY**  
LITHOTRIPSY, BPH,  
TUMOR (Bladder),  
URETHRAL STRICTURES

Potent HZ Series Holmium Laser system can be used to perform  
incision, excision, resection ablation, vaporization, coagulation  
and hemostasis of soft tissue and in lithotripsy of stones in  
various medical specialties, including:

# ORDERING INFORMATION

## HOLMIUM LASER

Ships with Foot Pedal / Switch and Power Cable

## LASER FIBERS

Potent Reusable Fiber

## ACCESSORIES

Fiber Stripper / Peeler - Adjustable

Diamond Fiber Cutter

Laser Glasses

Foot Pedal / Switch

## POWER CABLES

Laser Power Cable, Configuration 1 EU Countries and Indonesia, Turkey, Egypt, Tunisia, Peru, Russia

Laser Power Cable, Configuration 2 United States, Columbia, Taiwan

Laser Power Cable, Configuration 3 Brazil

Laser Power Cable, Configuration 4 (309 plug) Switzerland, Italy, France

Laser Power Cable, Configuration 5 Denmark

Laser Power Cable, Configuration 6 India, South Africa, Malaysia, Pakistan, Singapore

Laser Power Cable, Configuration 7 Israel, Palestine

Laser Power Cable, Configuration 8 (Bare cord - no plug end) UK, Japan, Australia, Other

# LASER FIBERS



## STANDARD FIBERS

For general use in stone and soft tissue treatments



## PERFORMANCE FIBERS

Designed to deliver great power even with small fibers



## BALL TIP FIBERS

Strongly simplify the insertion in already bent scopes



## GASTRO FIBERS

Specifically designed for the fragmentation of gallstones

Potent Holmium Laser System can be operated with a large range of fibers, depending on the application, flexibility and settings required.

## JACKET

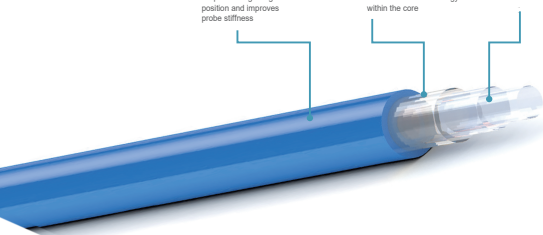
Helps in recognizing fiber position and improves probe stiffness

## CLADDING

Maintains radiation energy within the core

## FIBER CORE

Delivers full energy to the target



## Technical Data

|  |  |
|--|--|
| <b>Wavelength / spectral range</b>     | Optran ® UV: 190 – 1200 nm , Optran ® WF: 300 – 2400 nm  |
| <b>Holmium laser fiber</b>             | 200µm,275µm,365µm,550µm,800µm,1000µm   |
| <b>Numerical aperture (NA)</b>         | 0,12 ± 0,02   0,22 ± 0,02   0,28 ± 0,02 or customised  |
| <b>Operating temperature</b>           | -190° to +350°C  |
| <b>Core diameter</b>                   | Available from 25 µm to 2000 µm  |
| <b>Standard core / cladding ratios</b> | 1 : 1,04   1 : 1,06   1 : 1,1   1 : 1,15   1 : 1,2   1 : 1,25   1 : 1,4 or customised  |
| <b>OH content</b>                      | Optran ® UV: high (> 700 ppm)<br>Optran ® WF: low (< 1 ppm)<br>Fibers with OH contents < 0,25 ppm and < 0,1 ppm are available upon request |
| <b>Standard prooftest</b>              | 100 kpsi (nylon, ETFE, acrylate cladding)   70 kpsi (polyimide cladding)   |
| <b>Minimum bending radius</b>          | 50 × cladding diameter (short-term mechanical stress)<br>150 × cladding diameter (during use with high laser power)                        |

