YOUR PARTNER IN
MARINE SOLUTIONS

Smart Ship Solutions
Connecting People

SMART-MOPA(200w)

Smart Laser Cleaning Machine

PRODUCT OVERVIEW

MOPA portable drawbar box type laser cleaning machine

A cleaning machine that has many advantages such as portable and light, flexible and adjustable parameters, wireless control, etc.,which can efficiently remove rust, stains, oil and coating on the surface of the workpiece.

It can be applied to machining, cultural relic restoration, mold cleaning, food processing, electronic circuit and other industries.

CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

PRODUCT PICTURE

The characteristics of quasi-positioning, can meet the processing of a variety of modeling workpiece, to achieve efficient cleaning effect;

The cleaning machine is portable integrated design, super integrated injection molding case, buffer design, anti-pressure, anti-fall wear. Pull rod chassis, can be carried on high-speed rail and air consignment.

CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

TECHNICAL PARAMETER

Model	**iGCL-MOPA-200**
Output mode	Pulse
Laser	JPT
Control system	Wireless control card and program
Average output power	200W
Max. pulse energy	2mJ/5mJ
Pulse width	13-500ns
Type of cooling	Air cooling
Output armor length	5m
Max. power consumption	＜1000w
Whether anti-high reflection	Yes
Operating temperature range	0-40℃
Cleaning machine size	619*469*291mm
Voltage	220V.50/60HZ
Gross Weight	35 kg

CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

CLEANING COMPARISON

Compare items	Laser cleaning	Chemical cleaning	Mechanical grinding	Dry ice cleaning	Ultrasonic cleaning	Blast cleaning
Cleaning method	Contactless	Contact	Contact	Contactless	Contact dip	Contact
Workpiece damage	No damage	Damaged	Damaged	No damage	No damage	Damaged
Cleaning efficiency	High	Low	Low	Medium	Medium	Medium
Consumables	Just power up	Chemical cleaning agent	Sandpaper, Grinding wheel	Dry ice	Special cleaning agent	Special sand
Cleaning effect	Very talented High cleanliness	Generally Uneven	Generally Uneven	Excellent Uneven	Excellent Small clean area	Generally Uneven
Precise cleaning	Precise and controllable High accuracy	Can not control poor accuracy	Can not control Poor benchmark	Can not control poor accuracy	Cannot be specified Range cleaning	Can't clean dead corners
Safety/environmental protection	Safe and pollution-free	Seriously pollute the environment	Polluted environment	No pollution	No pollution	Polluted environment
Manual operation	Handheld or automated	The process is complicated high personnel requirements	Time consuming Protective measures are required	Handheld or automated	Manually add consumables	labor-intensive
Cost input	High initial cost low maintenance cost	Medium initial cost High cost of consumables	Medium initial cost High artificial consumables	Medium initial cost High cost of consumables	Low initial cost Medium cost of consumables	High initial cost High cost of consumables

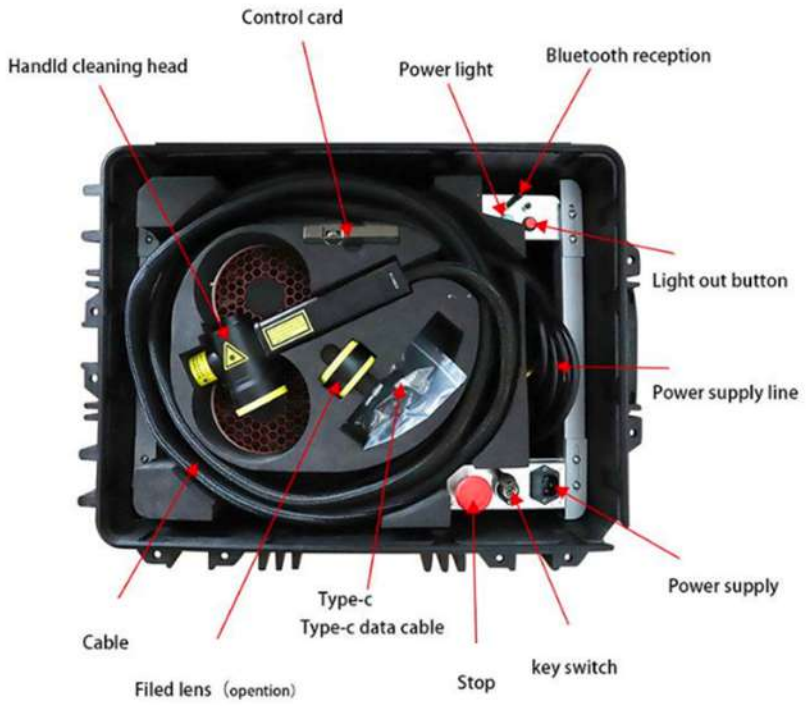
CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

CONFIGURATION INTRODUCTION

The following picture is the physical picture of the iGCL-MOPA 100W/200W portable handheld laser cleaning machine.

(the specific appearance is subject to the actual shipment):



CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

Laser

Equipped with a 100w/200w cleaning pulsed fiber laser as the cleaning light source, the laser adopts the MOPA (Master Oscillator Power Amplifier) structure, where the main oscillation uses a semiconductor laser as the seed source, and the power amplification is achieved through a traveling wave fiber amplifier. This MOPA fiber laser has the characteristics of independently adjustable pulse width and frequency, and can still maintain a high and stable peak power output under the condition of changing the pulse width and frequency to adapt to a wider range of cleaning scenarios.

Hand-held laser cleaning head

The handheld laser head of the cleaning machine has a simple appearance, small and light, and can be used for a long time. The button and handle are integrated design, which is simple and easy to use. The built-in scanning system uses a small high-speed motor and drive. The main body is integrated process-ing and molding, which is strong and dustproof, stable and durable. The laser head adopts an innovative red light auxiliary focusing design, which can easily find the focus position under different field lenses by using the red light indicator, which solves the problems of inaccurate focus and single adjustment method of existing products on the market.

Laser cleaning control card

The control system adopts the laser cleaning control card and program independently designed by JPT, which can controlthe laser parameters and the scanning system parameters at the same time, and is equipped with a handheld wireless control card. The control card is connected to the washing machine in a wireless way, which can realize remote control of the scan shape, scan length, laser output power, frequency, pulse width and other parameters. The power interface is a standard three-plug 220V AC power supply, which can be cleaned after power on.

CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

Interface and status display

The operation is intuitive and convenient, has a clear understanding of the production situation and can respond to emergencies.

Trolley case portable design

Portable trolley box design, super integrated injection molding case, buffer design, stable structure, wear resistance, shock resistance, fall resistance;

The machine weighs 28kg and can be checked by high-speed rail or air.

Advanced Performance

- It can work offline and can be cleaned after power on;
- Laser collimation output, output spot size can be customized (default 4mm spot);
- The laser cleaning head is extremely lightweight, weighing only 620g (without armor cable), and can be operated by hand for a long time;
- Patented red light assisted focusing technology, can adjust the focus position according to different field lenses;
- Wireless control, parameter setting and light control can be realized remotely, and parameters can be updated at any time;
- Portable trolley case design, the weight of the whole machine is 28kg, and it can be transported by high-speed rail or air;
- Super integrated injection molding chassis, cushioning design, stable structure, wear resistance, shock resistance and drop resistance.

CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions

Samples

- Rust removal on metal surface;
- Surface paint removal treatment;
- Surface resin, oil, stains, dirt cleaning;
- Surface coating, coating removal;
- Pretreatment of welding surface/spraying surface;
- Removal of dust and attachments on the surface of stone statues;
- Rubber mold residue cleaning.

CONTACT US FOR MORE INFORMATION

Head Office : 7 Soon Lee Street, #03 - 23, Ispace, Singapore, 627608
Phone: +65 9066 5337 Email: sales@smartship.com.sg Website: www.smartship.solutions