BENTSAI
INKJET CODING SOLUTIONS

Industrial Inkjet Coding Printer

Quick Installation Guide

Components Rereference (Controller Box)

☞ The number of available components depends on the printer model. Please refer to the specific packing list.

Controller	Printhead	Controller Base	Printhead Base	Dual-Pass Bar Clamp
①	②	③	④	⑤

Bar Base	Handle Screw M8X20	Optical Sensor Mount	S3/S4/S6 Hexagon Spanner
⑥	⑦	⑧	⑨

Printhead Cable	96W Power Adapter	Power Cord	Screen Pen	Optical Sensor
⑩	⑪	⑫	⑬	⑭

USB	Long Bar (20*380mm)	Short Bar (20*300mm)	External Sensor Guide Tube (250mm)
⑮	⑯	⑰	⑱

Ground Wire	40# Screw Nut	Screw M5X20	Screw M4X12
⑲	⑳	㉑	㉒

Screw M4X16	Screw 3MX6	QC Pass	Dual Printheads Plate	Quad Printheads Plate
㉓	㉔	㉕	㉖	㉗

Components Reference (Printhead Box)

👉 The number of available components depends on the printer model. Please refer to the specific packing list.

Printhead	Printhead Base	Dual-Pass Bar Clamp	Bar Base	Handle Screw M8X20
①	②	③	④	⑤
Printhead Cable	Short Bar (20*300mm)	Ground Wire	40# Screw Nut	
⑥	⑦	⑧	⑨	
Screw M5X20	Screw M4X12	Screw M4X16	QC Pass	
⑩	⑪	⑫	⑬	
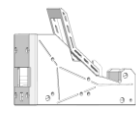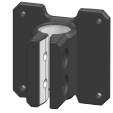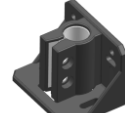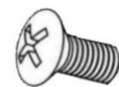
Optional Components Reference
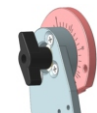
Encoder	Anti-Shocking Module	Rotation Module	X-Y Tuning Module
②	③	④	⑤
Optical Sensor	Beacon	Floor Stand for Conveyor	Conveyor
⑥	⑦	⑧	⑨

Controller Assembling

Controller

1.Controller
2.Controller Base
22.Screw M4X12

Optical Sensor

P1/P2
P1/P2/P3/P4

Power Adapter

SENSOR	SYNC WHEEL	P1	P2	P3	P4	LIGHT	POWER
1	2	3	4	5	6	7	8	9

Ground Wire   Encoder   Beacon
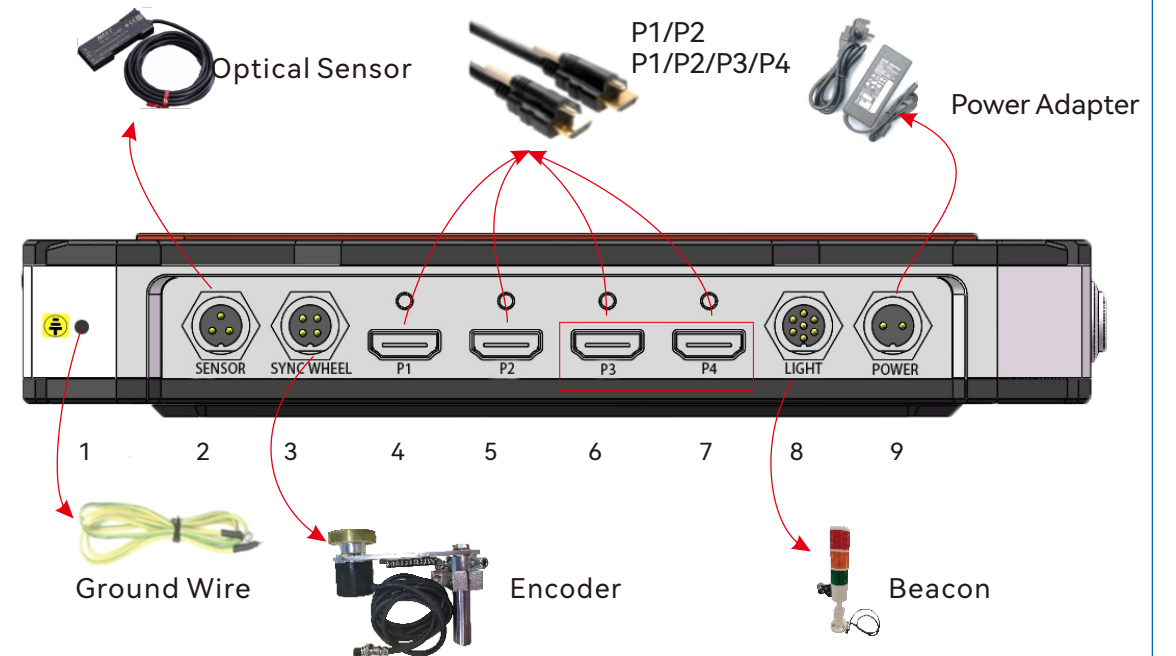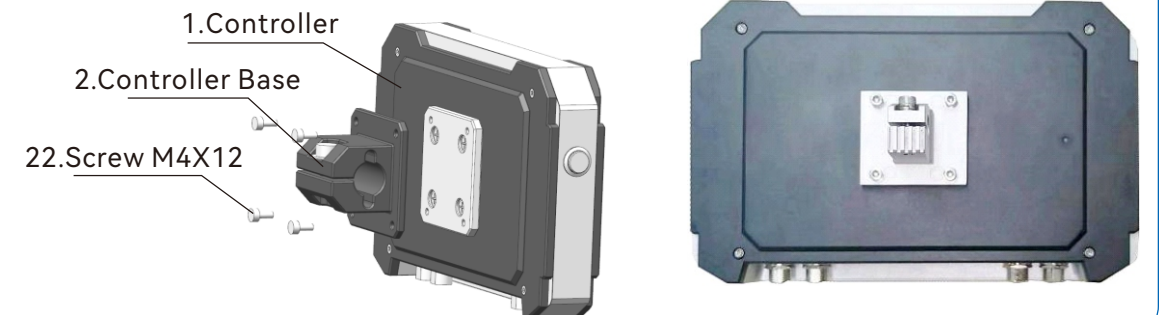
1——Ground Wire Port   4/5/6/7——P1/P2/P3/P4 Port
2——Optical Sensor Port   8——Beacon Port
3——Encoder Port   9——Power Adapter Port

👉 The number of available printhead ports is subject to the printer models.

👉 **Connect the printhead cables:** Attach the cables to the controller and printheads by matching the numbers (P1, P2, P3, P4). Secure them with screws.

👉 **Connect other components:** Attach the external sensor, power adapter (optional encoder and beacon) to their matching ports on the controller.

Printhead Assembling

Single Printhead

Printhead

0.5"/1" Single Printheads Plate

Dual Printheads

Printhead

Dual Printheads Plate
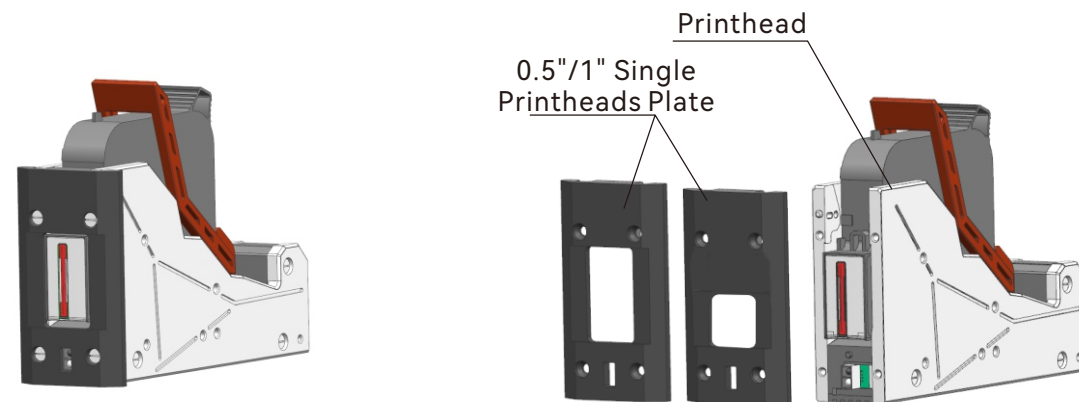
Quad Printheads
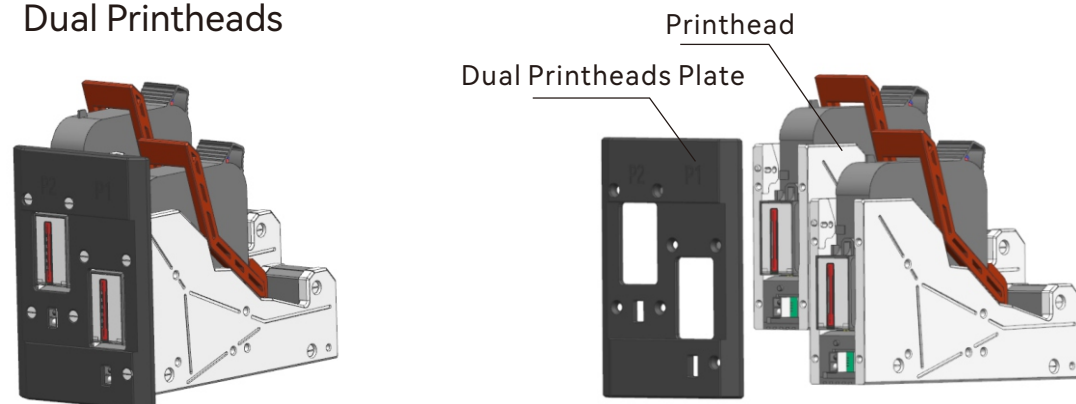
Printhead

Quad Printheads Plate
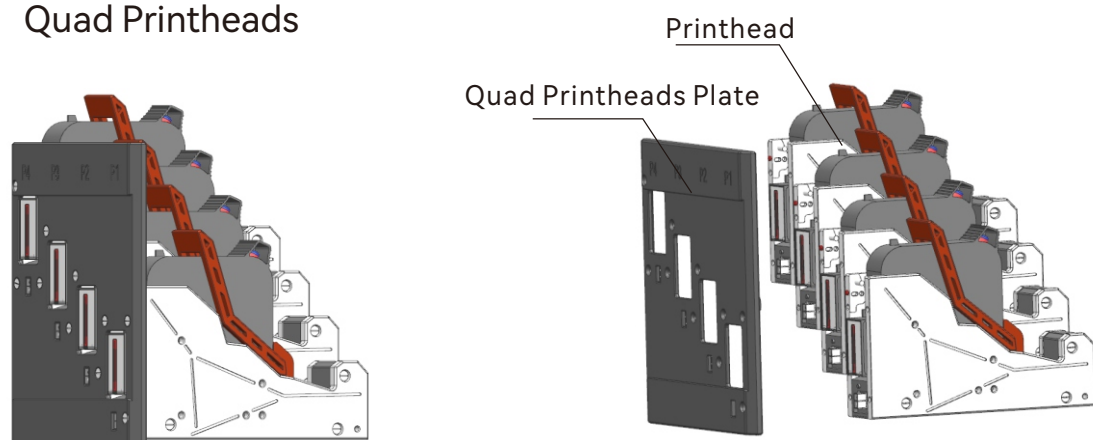
👉 The Printheads Plate are marked with the number P1/P2/P3/P4 respectively. Assemble them accordingly.

Mounting Holes on Printheads

2.Printhead

Ground Wire

Ground Wire Mounting Holes

X-Y Tuning Module Holes

Printhead Base Mounting Holes (Downward Printing)

*Rotation Module Mounting Holes

Printhead Base Mounting Holes (Sideward Printing)

*Anti-shocking Module Mounting Holes
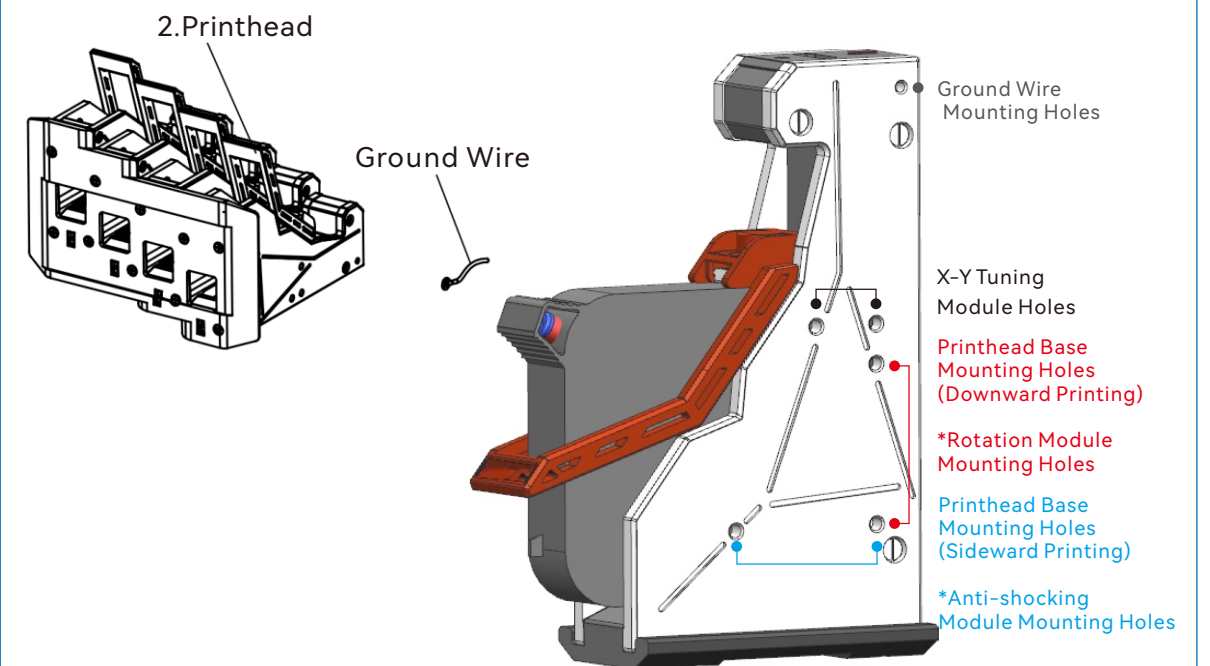
👉 When the rotation module is needed for installation, first attach the printhead base to the rotation module.
When the anti-shocking module is needed for installation, first attach the printhead base to the anti-shocking module.

Printhead Base Assembling

2.Printhead

4.Printhead Base

22.Screw M4X12

Sideward Printing
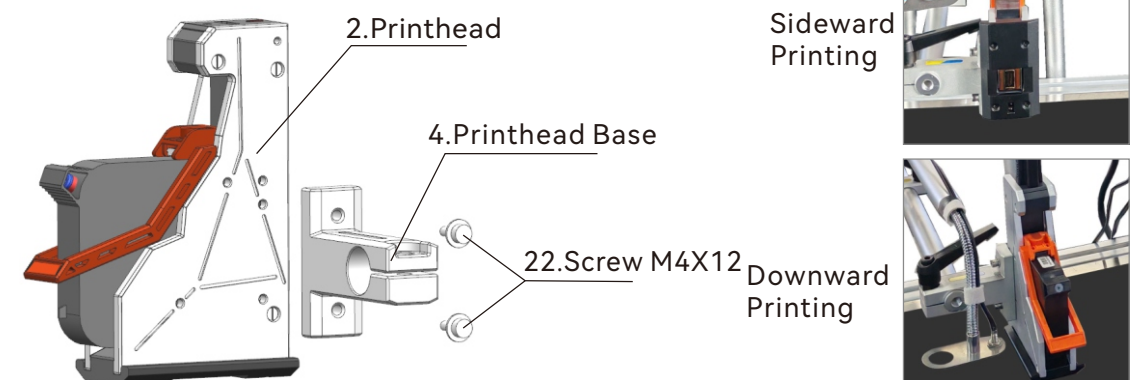
Downward Printing

👉 When installing the printhead(s),downward and sideward are optional based on your actual needs.

Sideward Printing Bracket Assembly Reference (Single Printhead)

17.Short Bar (20*300mm)

3.Controller Base

16.Long Bar (20*380mm)

5.Dual-Pass Bar Clamp

22.Screw M4X12

7.Handle Screw M8X20

22.Screw M4X12

17.Short Bar (20*300mm)

21.Screw M5X20

20.40# Screw Nut

6.Bar Base
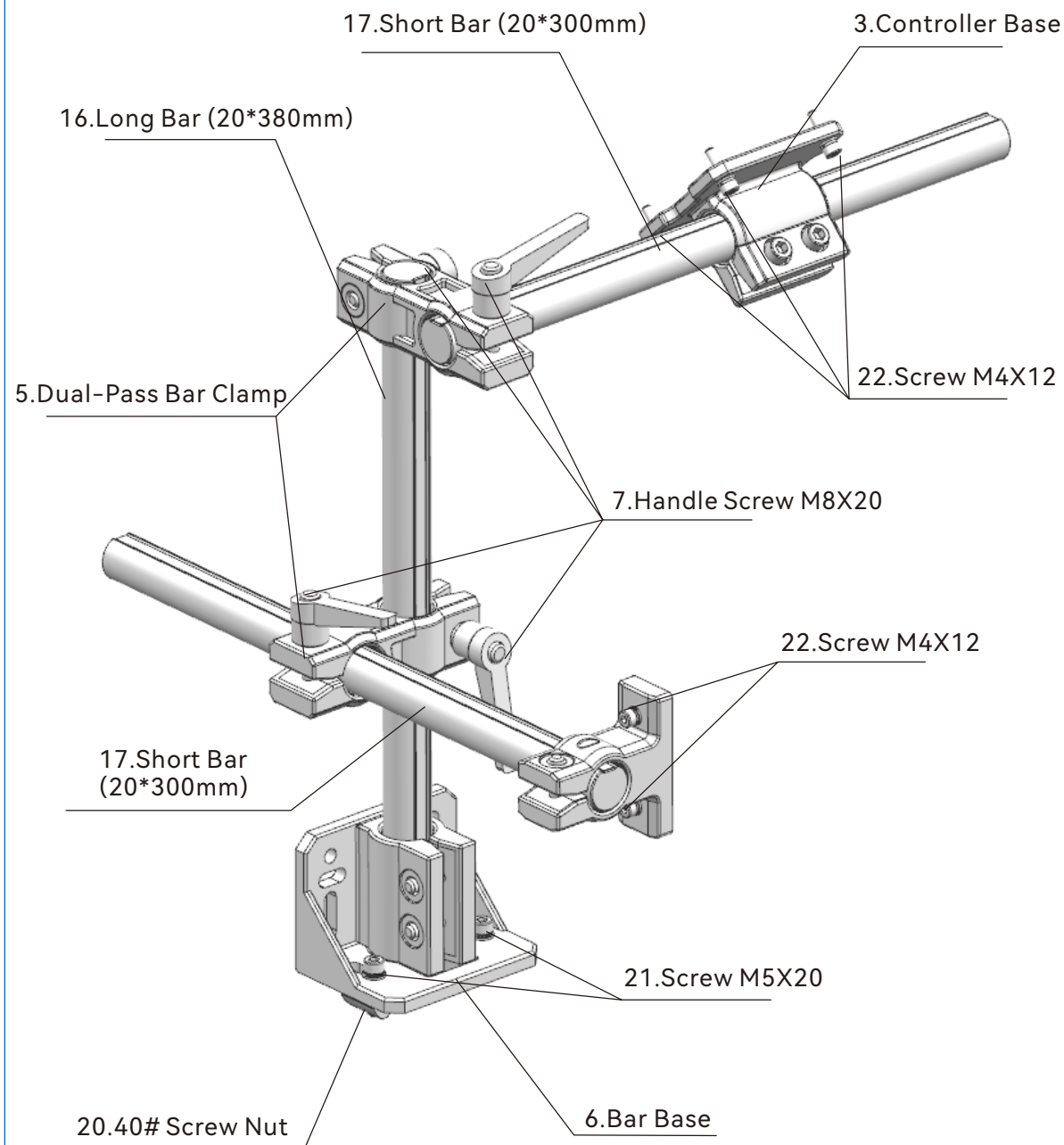
Sideward Printing Bracket Assembly Reference (Multiple Printheads, Seperated)

22.Screw M4X12

5.Dual-Pass Bar Clamp

17.Short Bar (20*300mm)

7.Handle Screw M8X20

17.Short Bar (20*300mm)

7.Handle Screw M8X20

16.Long Bar (20*380mm)

22.Screw M4X12

7.Handle Screw M8X20

5.Dual-Pass Bar Clamp

17.Short Bar (20*300mm)

4.Printhead Base

17.Short Bar (20*300mm)

6.Bar Base

20.40# Screw Nut

4.Printhead Base

20.40# Screw Nut

6.Bar Base
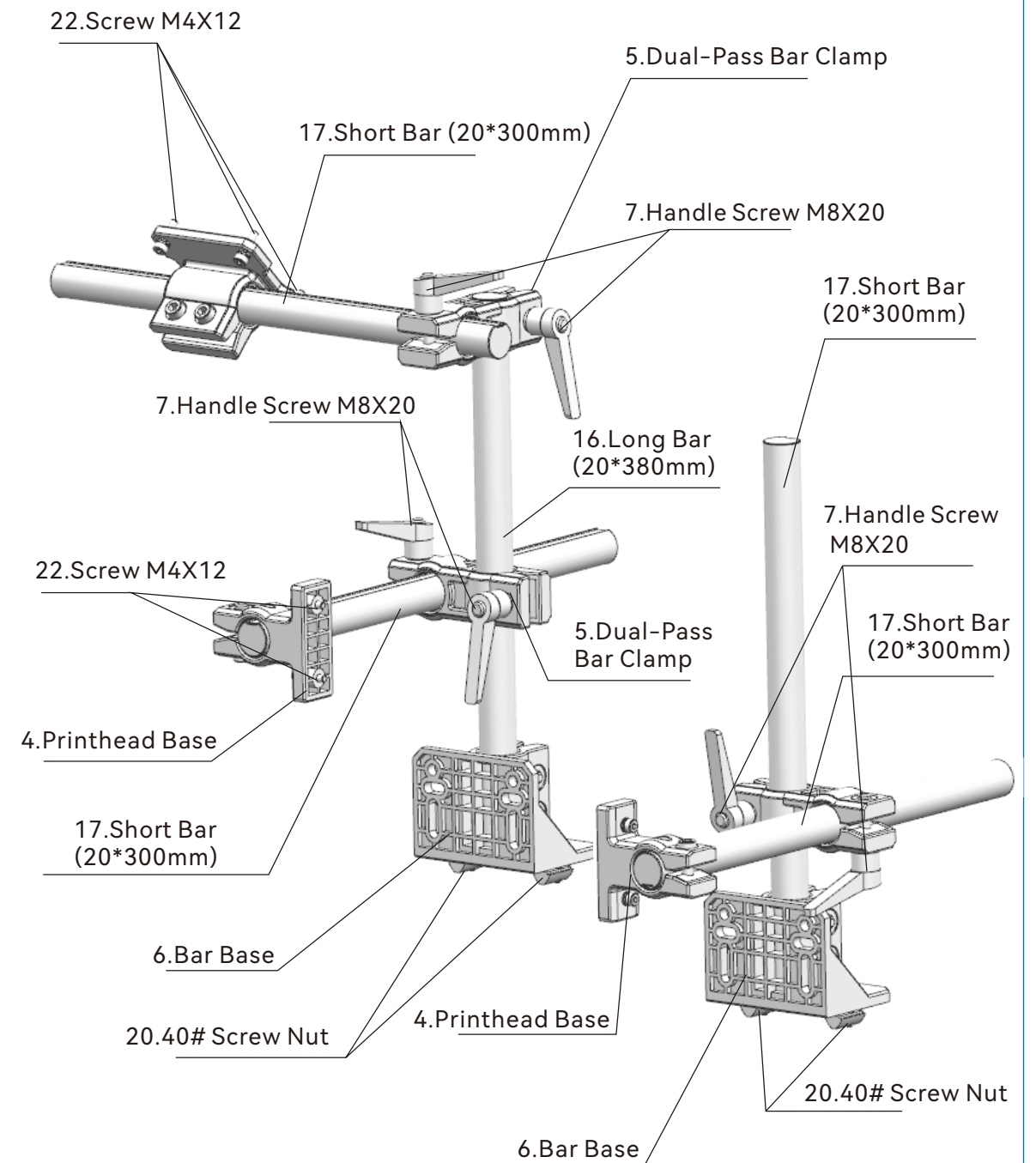
Encoder/External Sensor Assembling Reference

Encoder Assembling
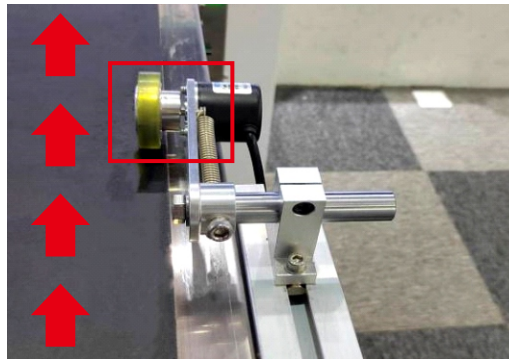
The encoder wheel should be in close contact with the conveyor belt.

External Sensor Assembling
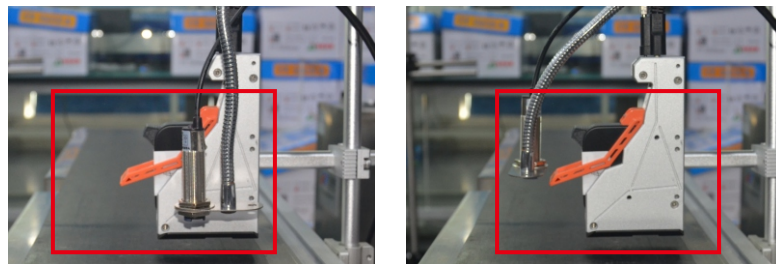
The distance between the sendor and print object should be between 10mm and 200mm.

Printhead Assembling
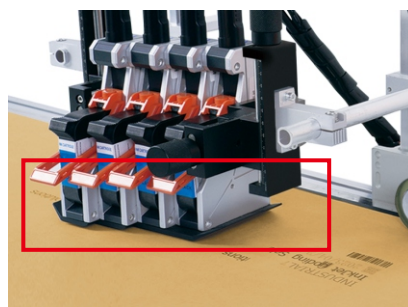
The required distance between print head Nozzles to print objects(Ink throw distance) is 2-5mm.

Printer Assembling Reference

Downward Printing
(Single Printhead)

Sideward Printing
(Single Printhead)

Downward Printing
(Dual Printheads)

Sideward Printing
(Dual Printheads)

Sideward Printing
(Dual Printeads-Seperated)

Downward Printing
(Quad Printheads)

Printer Assembling Reference

Sideward Printing
(Quad Printheads)

Important

1. Do not plug or unplug the connection cable while the printer is powered on.
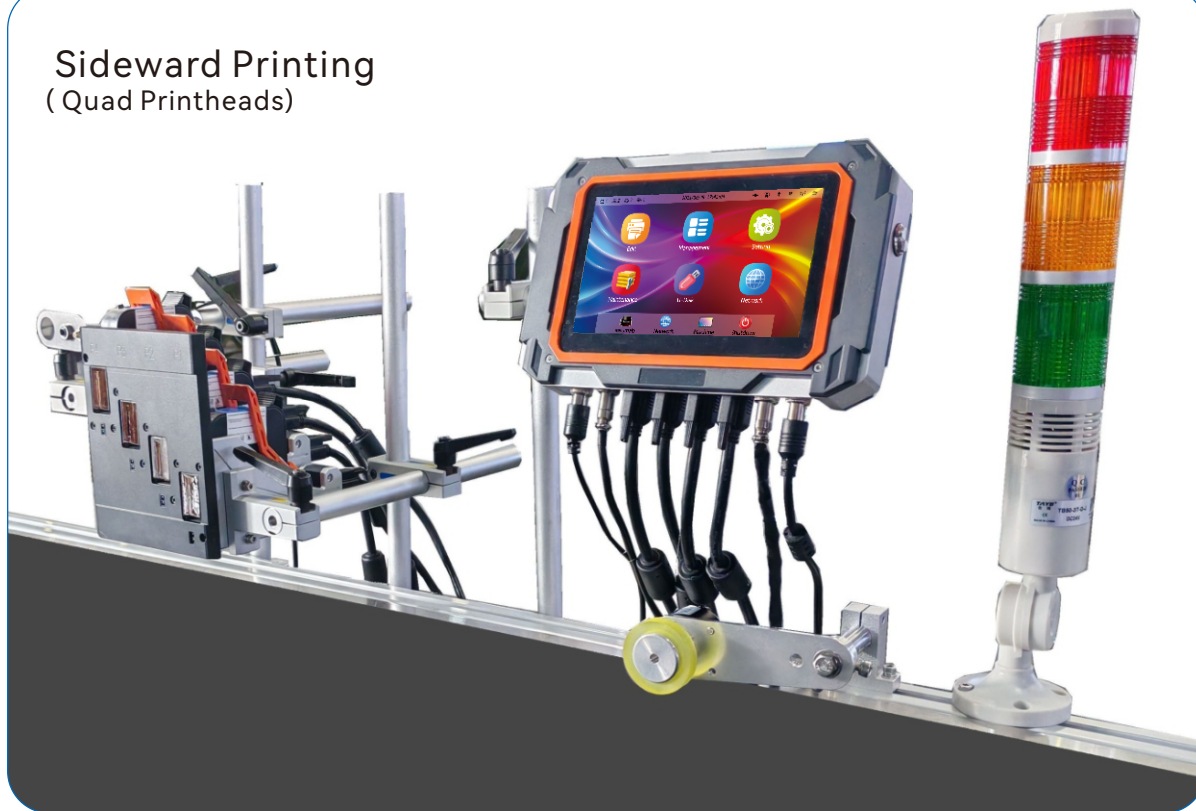
2. To ensure the best printing results, we recommend using original ink cartridges and accessories.

Using non-original ink cartridges and accessories may cause printer malfunctions and poor print quality, which are not covered under warranty.

3. Equipment failures caused by not following this manual are not covered under the product warranty.

Safety Instructions

1. After powering on the printer, there is high voltage inside. Do not perform maintenance or disassembly unless you are professionally trained and authorized, to avoid accidents.

2. Do not store ink cartridges in direct sunlight or at high temperatures (above 35°C), as this will affect the print quality and shelf life of the ink.

3. If ink accidentally splashes into your eyes or onto your skin, rinse immediately with clean water and seek medical advice promptly.

Quick Guide on Printing Settings

● **Print with Internal Sensor**

On the main interface, click "Edit," then "Settings," and select "Print Settings" from the drop-down menu.

👉 Select the Internal sensor.

👉 Disable the sync wheel If no external encoder is installed.

👉 Set the print delay distance and conveyor speed.

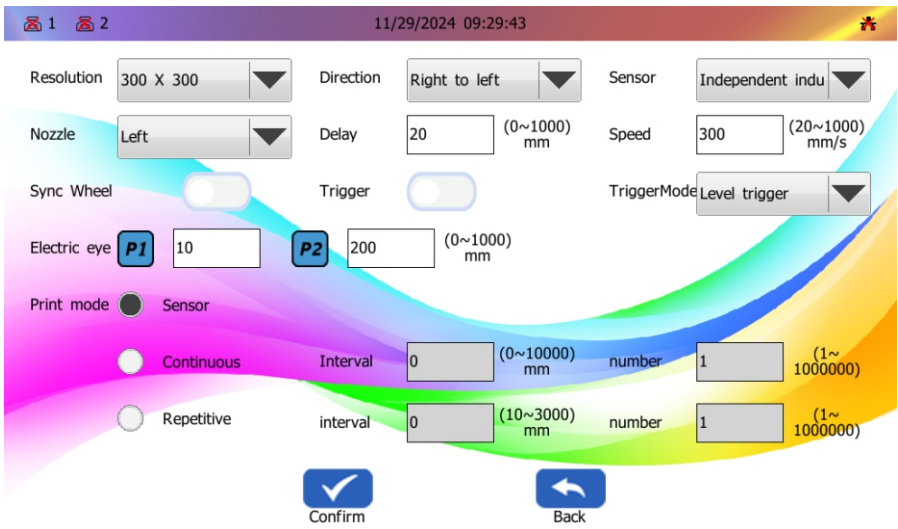● **Print with External Sensor**

👉 Select external sensor if you are not using the built-in internal sensor.

👉 Disable the sync wheel If no external encoder is installed.
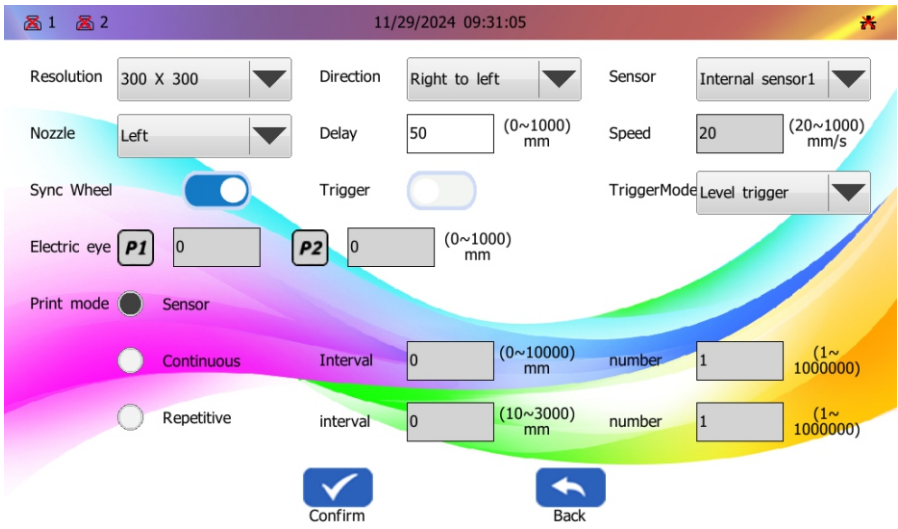
👉 Set the print delay distance and conveyor speed.

● Print with Independent Delay

When using two or more printheads, you can enable the independent delay function.

☞ Select "Independent Induction."

☞ Set the delay distance for each printhead under the electric eye option.

● Print with External Encoder

☞ When the conveyor speed is not constant, you can install an external encoder to synchronize the conveyor speed. Please enable the Sync Wheel on this page.

☞ The external encoder (sync wheel) can be used in conjunction with the internal sensor, external sensor, or independent induction mode.

▶ Create Print Messages

On the main interface, click "Edit," then click "Add" to add text, date, counter, image, QR code, dynamic data, etc.
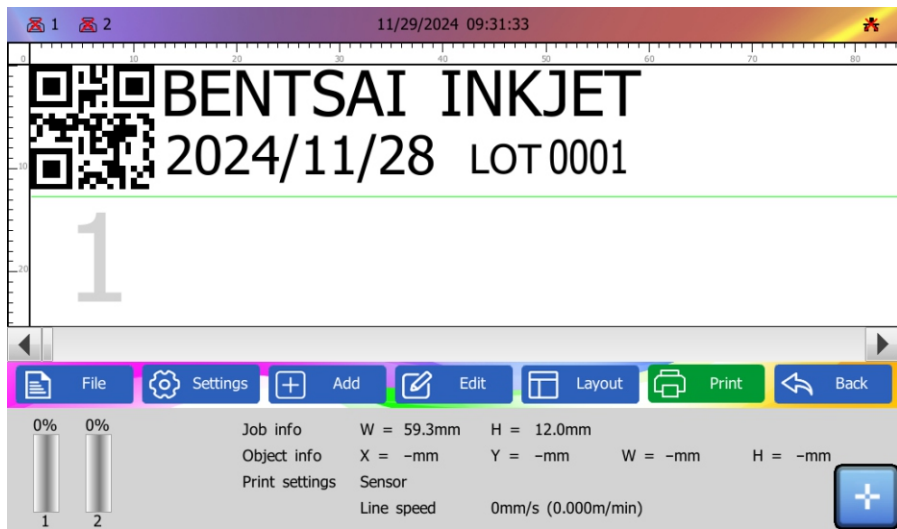
▶ Set Cartridge Parameters
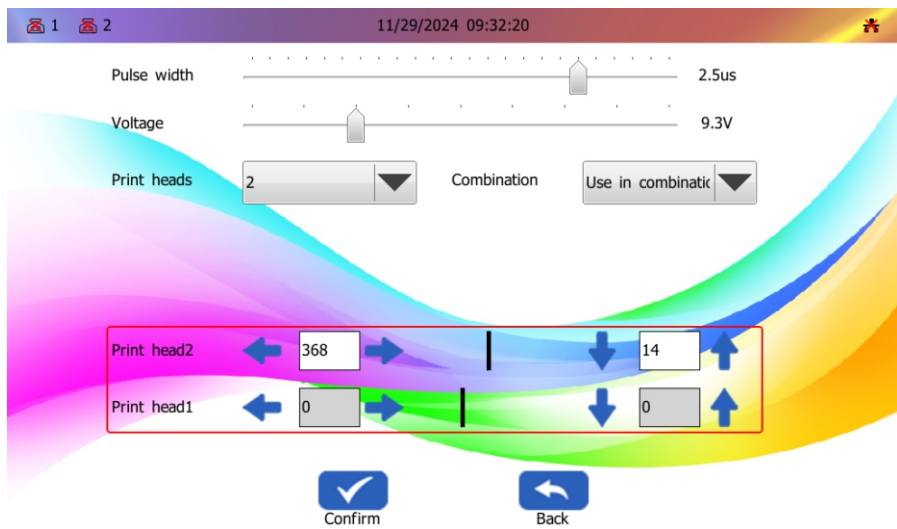
On the main interface, click "Edit," then "Settings," and select "Ink Settings" from the drop-down menu.

☞ When using Bentsai original cartridges, the printer can automatically detect and set the pulse width and voltage parameters once inserted.

☞ When using two or more printheads, you can choose between individual printing or stitched printing. For stitched printing, test the print first. If misalignments occur, adjust the stitching parameters on this interface.

☞ If you're still experiencing issues with installing or setting up our printer, please refer to our detailed User Manual or contact your seller.