

# JANOME ELECTRO PRESS

JP-104	JP-204	JP-504	JP-1004
JP-1504	JP-3004	JP-5004	
JPH-104	JPH-204	JPH-504	JPH-1004
JPH-1504	JPH-3004	JPH-5004	
JPU-104	JPU-204	JPU-504	JPU-1004
JPU-1504	JPU-3004	JPU-5004	JPU-8004

# Operation Manual

## <Setup>

**“For Qualified Installer ONLY”**

Thank you for purchasing the Electro Press.

- \*Read this manual thoroughly in order to properly use this machine. Be sure to read “For Your Safety” before you use the machine. It will protect you from possible dangers during operation.
- \*After having read this manual, keep it in a handy place so that you or the operator can refer to it whenever necessary.

# JANOME

# FOR YOUR SAFETY

## Safety Precautions



The precautions stated in this manual are provided for the customer to make the best use of this product safely, and to provide preventive measures against injury to the customer or damage to property.

. . . . **Be sure to follow the instructions** . . . . .

Various symbols are used in this manual. Please read the following explanations to understand what each symbol stands for.











● **Symbols indicating the Degree of Damage or Danger**

The following symbols indicate the degree of damage or danger which may be incurred if you neglect the safety notes.

	<b>Warnings</b> These “Warnings” indicate the possibility of death or serious injury.
	<b>Cautions</b> These “Cautions” indicate the possibility of accidental injury or damage to property.

● **Symbols indicating the type of Danger and Preventive Measures**

The following symbols indicate the type of safety measure that should be taken.

	Indicates the type of safety measure that should be taken.
	Take care. (General caution)
	Indicates prohibition.
	Never do this. (general prohibition)
	Do not disassemble, modify or repair.
	Do not touch. (contact prohibition)
	Indicates necessity
	Be sure to follow instructions.
	Be sure to unplug the power supply from wall outlet.
	Be sure to check grounding.

## FOR YOUR SAFETY

### Warnings



Do not leave the unit plugged in (power cord and connectors) when it is not in use for long periods of time. Dust can cause fire.

**Be sure to shut off the power supply before removing the power cord.**



**Regularly replace the built-in battery (optional) in the body or control box.** It is preferable to replace it every 3 years.

Failure to do so may cause malfunction or defect.



**Keep the emergency stop switch within reach of an operator while teaching and running the machine.**

Failure to do so is dangerous because the machine cannot be stopped quickly and safely.



**Regularly check that the I/O-S circuits and emergency stop switch work properly.**

Failure to do so is dangerous because the machine cannot be stopped quickly and safely.



**Check the mounting screws regularly so that they are always firmly tightened.**

Loose screws may cause injury or damage.



**Power the unit only with the rated voltage.**

Excessive voltage can cause fire or malfunction of the unit.



**Do not sprinkle water or oil on the unit, control box, or its cable.**

Contact with water can cause electric shock, fire, or malfunction of the unit. IP Protection Rating is IP40.



A person entering the machine's operation area may be injured.

**Put up a "No Entry" or "No Operating" warning sign** in a clearly visible position near the machine.

# FOR YOUR SAFETY

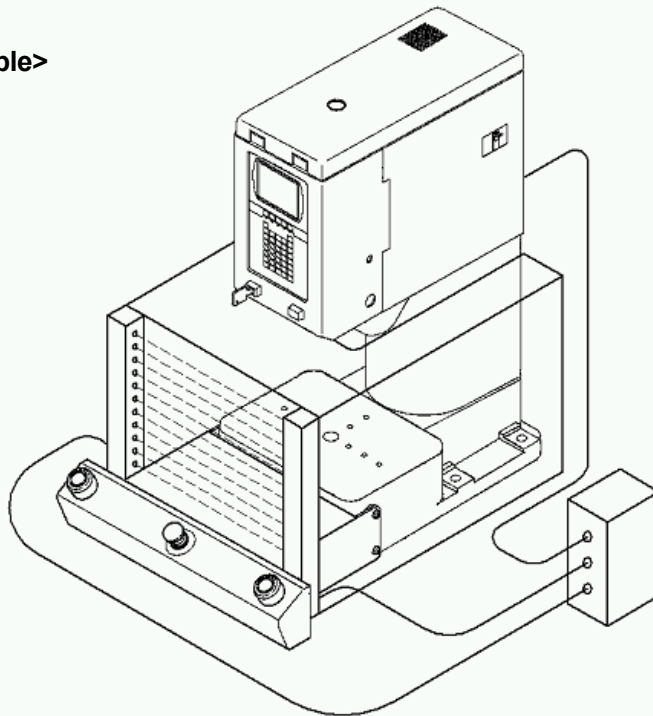
## INSTALLATION

### Warnings



Install an interlock as a safeguard that triggers an emergency stop when it is activated using the I/O-S connector included in the package.

<Example>



Use protective wear (helmet, protective gloves, protective glasses and protective footwear) when installing the machine.



Place the machine in a well-ventilated area for the health and safety of the operator.



Place the machine on a suitable flat surface that can support its weight and do not cover the cooling fan vent on the top of a stand-alone and head type.

An insufficient or unstable area can cause the machine to fall, overturn, breakdown or overheat.

## FOR YOUR SAFETY

### Warnings



**Confirm that the unit is properly grounded.**

Power supply earth should be connected complying with Type D grounding.  
(under 100  $\Omega$  of resistance.)

Insufficient grounding can cause electric shock, fire or malfunction.



**Plug the power cord into the wall outlet firmly.**

Incomplete insertion into the wall outlet heats the plug and can cause fire.  
Check that the plug is not covered with dust.

Be sure to shut off the power supply before connecting the power cord



**Do not attempt to disassemble or modify the machine.**

Disassembly or modification may cause electric shock, fire or malfunction.



**Be sure to use within the voltage range indicated on the unit.**

Failure to do so may cause electric shock or fire.



**Do not use the unit near inflammable or corrosive gas.**

If leaked gas accumulates around the unit, it can cause fire.

IP Protection Rating is IP40.



**Turn off the unit before inserting and removing cables.**

Failure to do so may result in electric shock, fire, or malfunction of the unit.

IP Protection Rating is "IP40."



**Use the machine in an environment between 0 to 40 degrees centigrade with a humidity of 20 to 95 percent without condensation.**

Use outside tease conditions may result in malfunction.

IP Protection Rating is "IP40."



**Keep the emergency stop switch within reach of an operator while teaching and running the machine.**

Failure to do so may cause danger since the machine cannot be stopped immediately and safely.

## FOR YOUR SAFETY

### Warnings



**Use the machine in an environment where no electric noise is present.**



**Attach an eyebolt and use a crane or other equipment to transport the machine.**

Failure to do so may result in malfunction or defect.



**Do not bump or jar the machine while it is being transported or installed.**

This can cause defects.



**Use the machine in an environment where it is not exposed to direct sunlight.**

Direct sunlight may cause malfunction or defect.



**Be sure to confirm that jigs such as the electric screwdriver unit, etc. are properly connected.**

Failure to do so may result in injury or defect.



**Be sure to check the wiring to the main unit.**

Improper wiring may cause malfunction or defect.



**Be sure to shut off the power supply before plugging the power cord.**



Place the control box on a flat surface more than 80 cm above the floor so that it is easier to operate it.



The installation mount should be steel. **For the stand-alone type, it should be able to support the machine's weight. For the head and unit types, it is able to support the machine's weight and pressing capacity.**



**Use the machine in an environment that is not dusty or damp.**

Dust and dampness may cause failure or malfunction.

## FOR YOUR SAFETY

### WORKING ENVIRONMENT

## Warnings



**When you lubricate or inspect the unit, unplug the power cord from the outlet.**

Failure to do so may result in electric shock or injury.

**Be sure to shut off the power supply** before removing the power cord.



**During operation, always have the emergency stop switch within the operator's reach.**

For the operator's safety, the emergency stop switch is necessary to make a quick and safe stop in an emergency.



**Always be aware of the machine's movement,** even in the teaching mode.

Special attention will protect the operator from injury.

## FOR YOUR SAFETY

### DURING OPERATION

## Warnings



When starting the machine, check that **no object will interfere with the machine's operation.**



**Under no circumstances should you go inside the working area or place your hands or head inside the working area while the machine is operating.**



**If anything unusual (e.g. a burning smell) occurs, stop operation and unplug the cable immediately. Contact your dealer or the office listed on the last page of this manual.**

Continuous use without repair can cause electric shock, fire, or breakdown of the unit.



**During teaching, tests, and actual operation, always have the Emergency stop switch within the operator's reach.**

For the operator's safety, the emergency stop switch is necessary to make a quick and safe stop in an emergency.



## PREFACE

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The operation manual for the JANOME Electro Press consists of the following volumes.

“**For Your Safety**” is also provided so that the customer can make the best use of this product safely. This section includes preventive measures that can be taken against injury to the customer or damage to property. Please be sure to read “For Your Safety” before using this product.

Setup	This volume explains how to set up the Electro Press. * For those who have received training in Electro Press safety and installation.
Maintenance	This volume explains Electro Press maintenance. * For those who have received training in Electro Press safety and installation.
Teaching and Operation	This volume lists part names and data structure as well as providing the basic knowledge necessary to operate the Electro Press.
Operation	This volume explains how to operate the Electro Press.
Specifications	This volume provides comprehensive specifications, including mechanical and electrical requirements.

Note: The product specifications in these volumes may differ from those of the machine you have received due to a product upgrade.

Please be sure to follow the instructions described in these volumes. Proper use of the robot will ensure continued functionality and high performance.

These volumes are based on the standard application. Menu items may vary depending on the model.



Be sure to shut off the power supply before plugging in the power cord.



**BE SURE TO MAKE A PROPER GROUNDING WHEN YOU INSTALL THE MACHINE.**



Be sure to save data whenever it is added or modified. **Otherwise, changes will not be saved if the power to the robot is cut off.**

# CONTENTS

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FOR YOUR SAFETY	i
PREFACE	viii
CONTENTS	ix
1. ENVIRONMENT	1
Notice regarding Installation of the Electro Press	2
2. SYSTEM CONFIGURATION	3
2-1 Stand-Alone Type	3
2-2 Head Type	4
2-3 Unit Type	5
3. INSTALLATION	6
3-1 Lifting	6
3-2 Setting	9
3-2-1 JP-104/JP-204, Stand-Alone Type	9
3-2-2 JP-504/JP-1004/JP-1504, Stand-Alone Type	10
3-2-3 JP-3004/JP-5004, Stand-Alone Type	11
3-2-4 JPH-104/JPH-204, Head Type	12
3-2-5 JPH-504/JPH-1004, Head Type	13
3-2-6 JPH-3004/JPH-5004, Head Type	14
3-2-7 JPU-104/JPU-204, Unit Type	15
3-2-8 JPU-504/JPU-1004, Unit Type	16
3-2-9 JPU-1504, Unit Type	17
3-2-10 JPU-3004/JPU-5004, Unit Type	18
3-2-11 JPU-8004, Unit Type	19
3-3 Wiring	20
3-3-1 Stand-Alone/Head Type	20
3-3-2 Unit Type	21
3-4 Base Dimensions	25
3-4-1 JP-104/JP-204, Stand-Alone Type	25
3-4-2 JP-504/JP-1004/JP-1504, Stand-Alone Type	26
3-4-3 JP-3004/JP-5004, Stand-Alone Type	27

3-5 Ram Mounting Jig	28
3-5-1 JP, JPH, JPU-104/204	28
3-5-2 JP, JPH, JPU-504/1004/1504	29
3-5-3 JP, JPH, JPU-3004/5004, JPU-8004	30
3-5-4 Switching I/O-SYS and I/O-1 Power Supply	31
3-6 Safeguard Installation	32
4. HOW TO BACK UP UNIQUE NUMBER AND INSTALL SETTING DATA	35
5. HOW TO INSTALL PRESS SYSTEM SOFTWARE	36
6. TEACHING DATA BACKUP	38

# 1. ENVIRONMENT

- **Place the machine on a suitable flat surface that can support its weight.**

Be sure to leave a space greater than 30cm between the back of the control box equipped with a cooling fan and the wall. Do not cover the cooling fan vent on the top of a stand-alone or head type press. An insufficient or unstable area can cause the machine to fall, overturn, breakdown, or overheat.

- **If you use an installation mount, it should be able to support the machine's weight.**

The installation mount should be steel. For the stand-alone type, it should be able to support the machine's weight. For the head and unit types, it should be able to support the machine's weight and pressing capacity.

- **Place the machine in a well-ventilated area for the health and safety of the operator.**

- **Do not use the machine near inflammable or corrosive gas.**

If leaked gas accumulates around the machine, it can cause fire or explosion. IP Protection Rating is "IP40."

- **Use the machine in an environment between 0 to 40 degrees centigrade with humidity of 20 to 95 percent without condensation.**

Use outside these conditions may result in malfunction. IP Protection Rating is "IP40."

- **Avoid using any equipment emitting electric noise nearby.**

Electric noise can cause the machine to break down.

- **Use the machine in an environment where it is not exposed to direct sunlight.**

Direct sunlight may cause malfunction or defect.

- **Use the machine in an environment that is not dusty or damp.**

## Notice regarding Installation of the Electro Press

When you install the Electro Press, especially when mounting it on an automatic machine, please be sure to follow the instructions below.

- Be sure to ground the Electro Press and other equipment securely. Keep grounding resistance impedance as low as possible.
- Use the shield for the I/O cable and make the wiring length as short as possible. Ground the shield of the I/O cable.
- Wire the power supply cord separately from the I/O cable. Never bundle the power supply cord and the I/O cable together.
- The wiring between the electric power system and the signal system in the distribution panel should be isolated.
- Do not place or install any equipment emitting electric noise near the Electro Press. Use a power source that supplies stable power. Do not plug multiple cables into one electrical outlet.
- The load cell at the end of the ram should be periodically checked and, if necessary, calibrated. When you install the Electro Press, leave enough space to allow load cell calibration (for example by making the jigs under the ram detachable.)
- Leave space between the Electro Press and wall or any other obstacle so that you can remove the cover with a screwdriver when it is necessary to repair the unit. Also, leave sufficient space at the side for the cooling fan to cool the unit.
- After completing the wiring of the Electro Press, confirm the wiring status using the following procedure.
  1. Select [Diagnosis Mode] from the maintenance mode menu.
  2. Select [External I/O Diagnosis.]

### **IMPORTANT: For your safety, never disassemble or modify the Electro Press.**

We are not liable for injury or damage caused by a modified Electro Press.

#### **Switch Box**

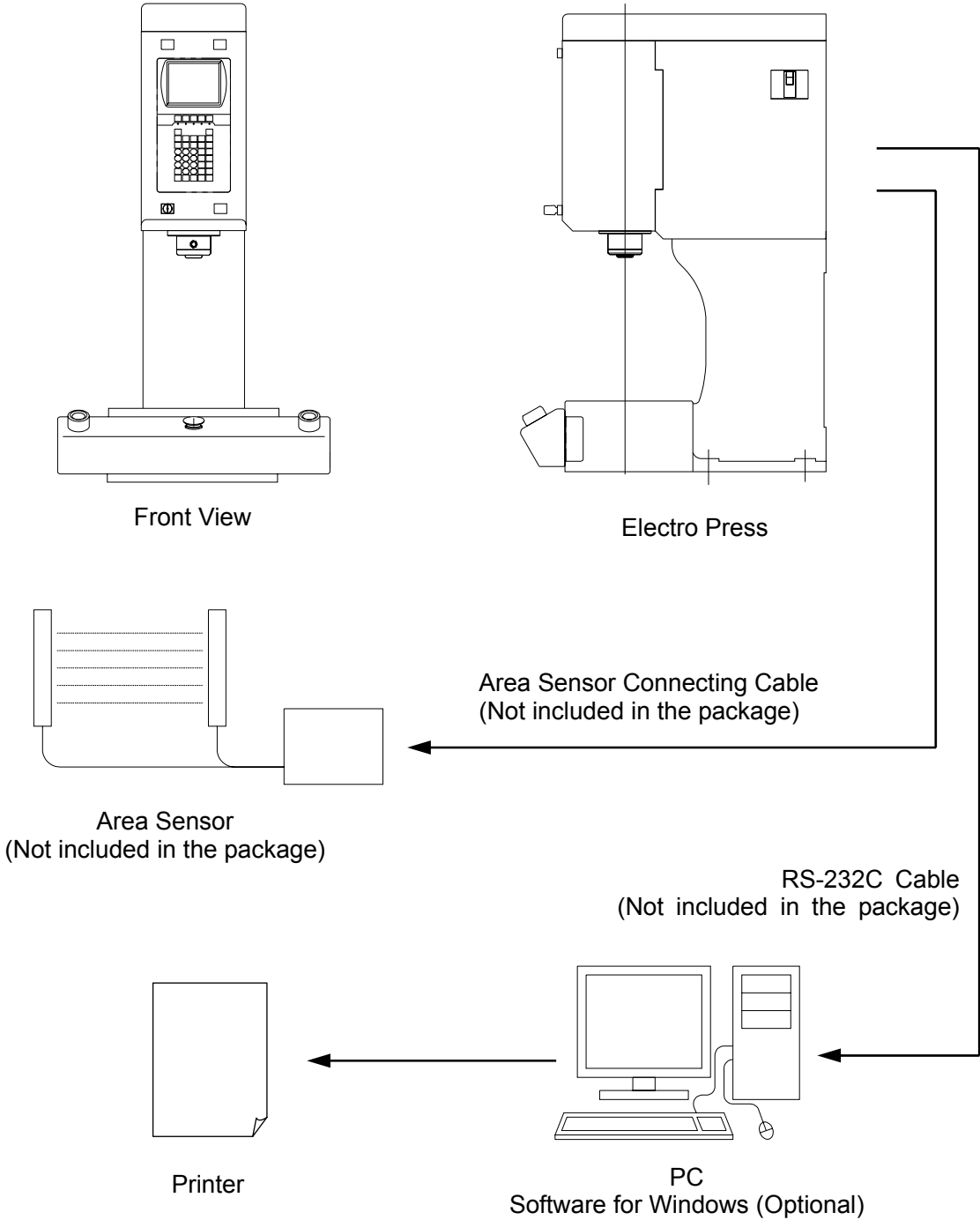
We suggest that you use our standard switch box (optional for the unit type.) If you use a different switch box, be sure to use a shield wire in addition to the I/O cable.

If you want the switch box to be detached, state your request on the order sheet. We will equip the Electro Press with a connector for the switch box at the rear of the unit.

# 2. SYSTEM CONFIGURATION

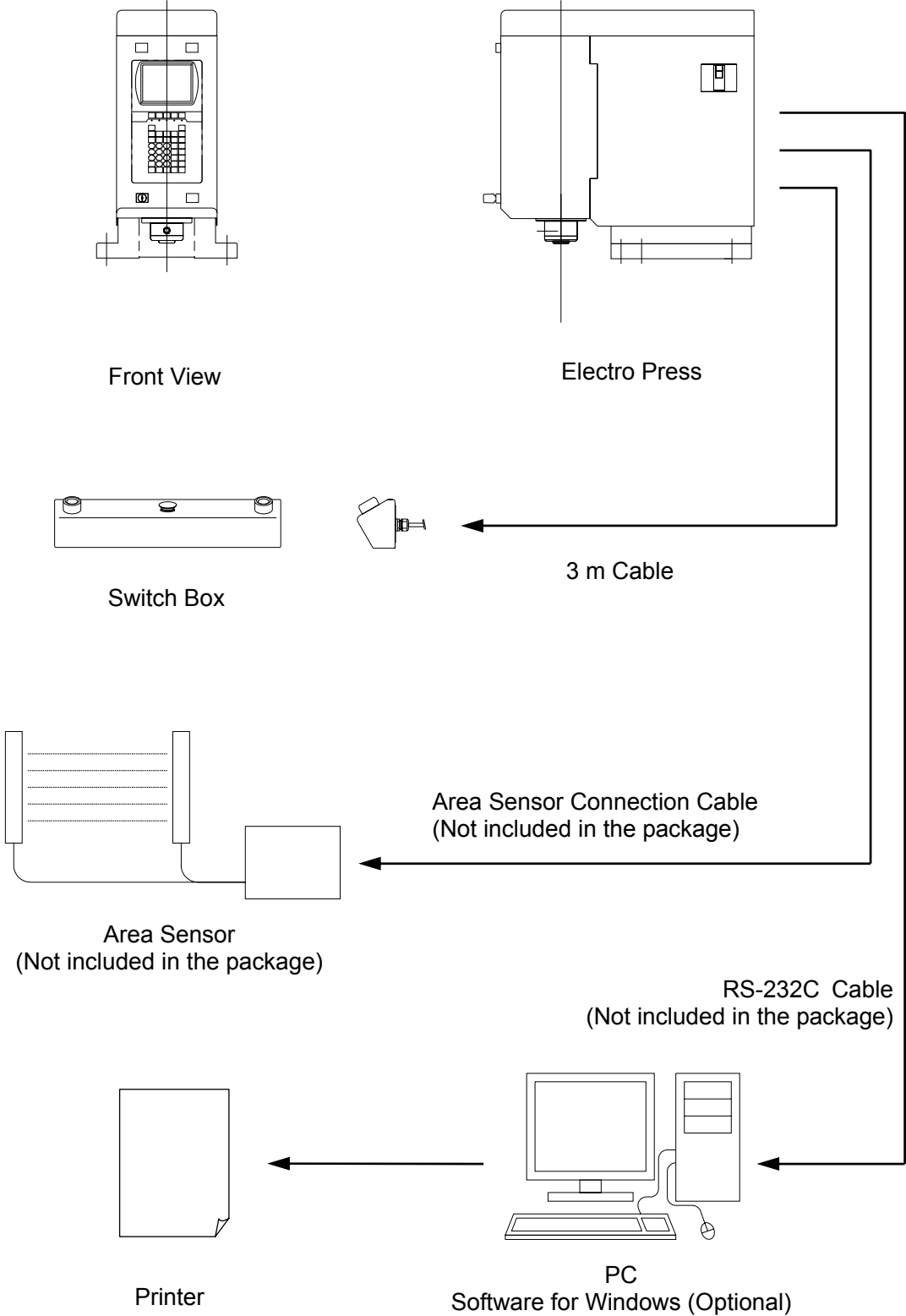
## 2-1 Stand-Alone Type

The illustration shows the JP-504.



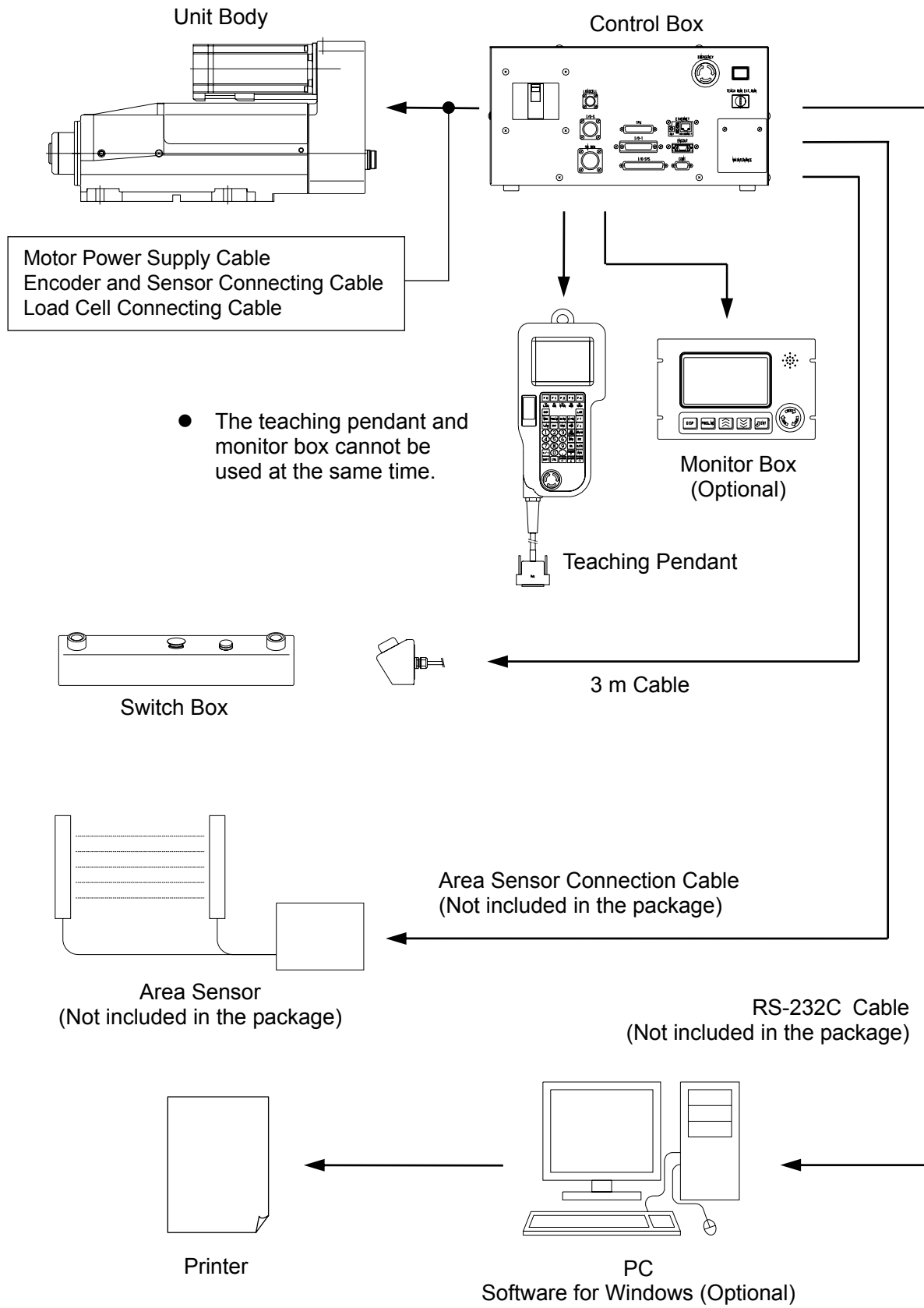
**2-2 Head Type**

The illustration shows the JPH-504.



## 2-3 Unit Type

The illustration shows the JPU-504.





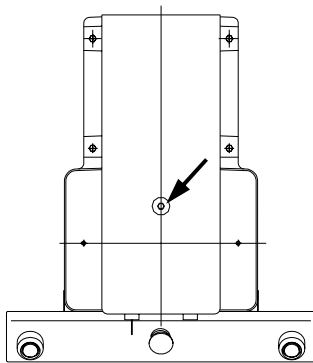
### 3. INSTALLATION

#### 3-1 Lifting

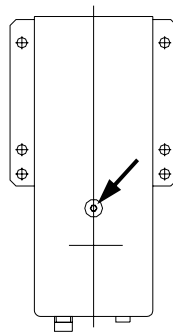
##### Stand-Alone/Head Type

Attach the eyebolts provided to the top of the body to lift the Electro Press with a crane. Confirm that the eyebolts are firmly tightened. Be careful when the Electro Press is lifted because it will be inclined.

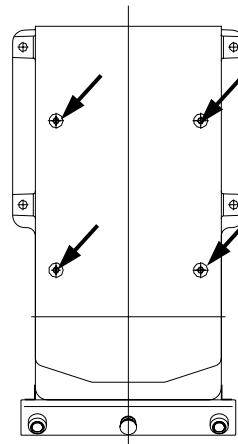
<u>Size of Eyebolts</u>	JP-104/JP-204:	M10
	JP-504/JP-1004/JP-1504:	M12
	JP-3004/JP-5004:	M16 (4 pieces)



Stand-Alone Type  
(Top view)



Head Type (Top view)



JP-3004/JP-5004

 Indicates Eyebolt Hole

##### <Body Weight of the Electro Press>

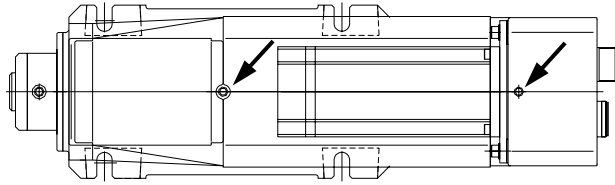
Model (Stand-Alone Type)	Weight	Model (Head Type)	Weight
JP-104	100 kg	JPH-104	80 kg
JP-204		JPH-204	
JP-504	160 kg	JPH-504	100 kg
JP-1004		JPH-1004	
JP-1504		JPH-1504	
JP-3004	1050 kg	JPH-3004	650 kg
JP-5004		JPH-5004	

Unit Type

Attach the 2 eyebolts to the top or rear side of the body (JPU-3004, 5004 and 8004) to lift the Electro Press with a crane. Confirm that the eyebolts are firmly tightened.

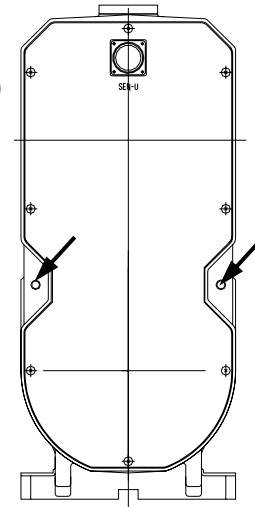
Size of Eyebolts

JPU-104/JPU-204: M8  
 JPU-504/JPU-1004/JPU-1504: M8  
 JPU-3004/JPU-5004/JPU-8004: M10 (2 pieces)



Unit Type (Top view)

↙ Indicates Eyebolt Hole



Unit Type (Rear)  
 (JPU-3004/JPU-5004/JPU-8004)

<Body Weight of the Electro Press>

Model (Unit Type)	Weight
JPU-104	18 kg
JPU-204	
JPU-504	
JPU-1004	35 kg
JPU-1504	
JPU-3004	
JPU-5004	160 kg
JPU-8004	

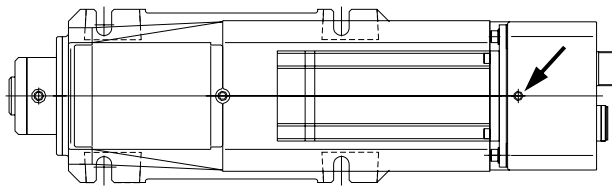


After installation of the body, be sure to remove the eyebolt and follow this procedure.

After removing the eyebolt, tighten the screw provided or attach the rubber cap provided to the eye bolt fixing hole.

Screw for the JP-104 and 204, JPH-104 and 204, JPU-104 to 1504  
Rubber cap for the JP-504 and 1004, JPH-504 and 1004

- For the unit type, tighten the screw provided to the eyebolt fixing hole indicated by the arrow.

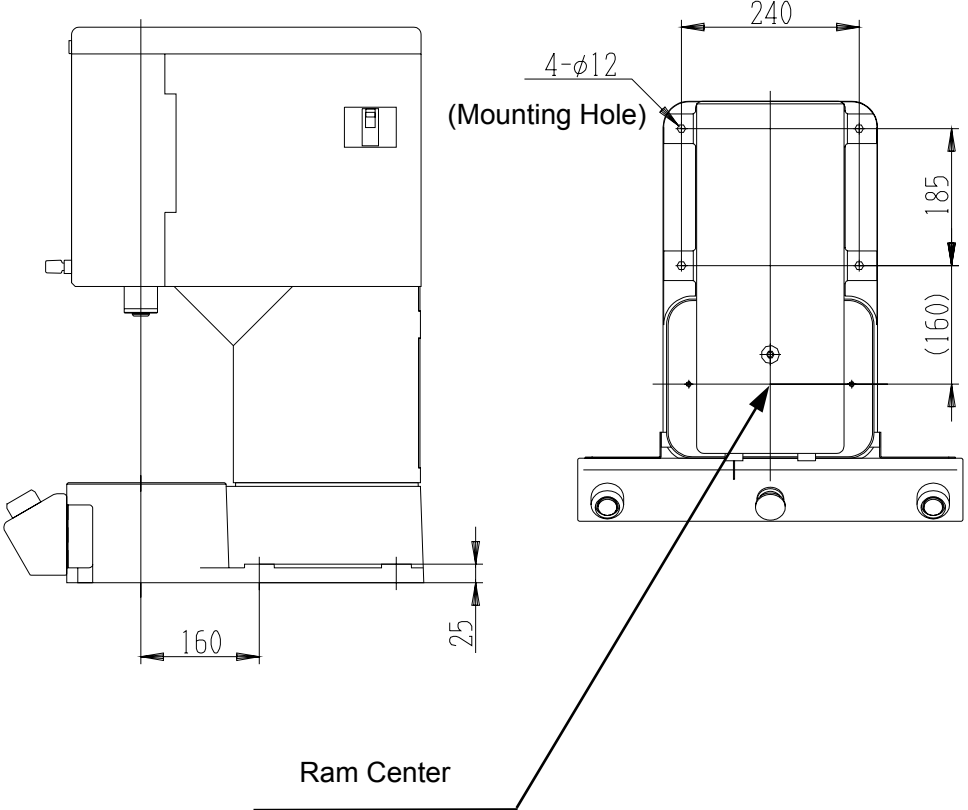


Top of the Unit Type

**3-2 Setting**

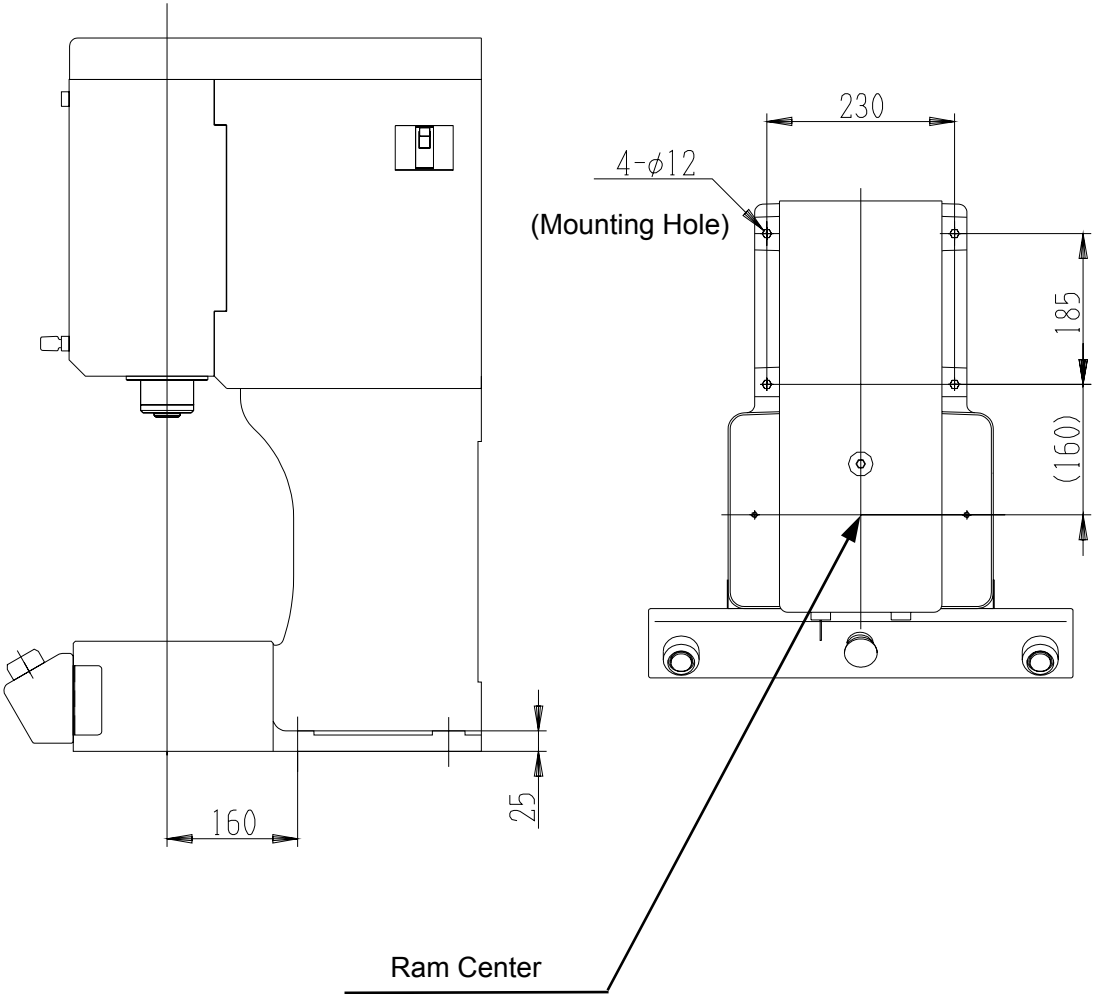
**3-2-1 JP-104/JP-204, Stand-Alone Type**

Fix the Electro Press to the mounting base at the screw holes using 4 M10 hexagon socket bolts (JIS Strength 12.9, Length 45 mm or more) and washers.  
Tighten the bolts to 70 Nm tightening torque.



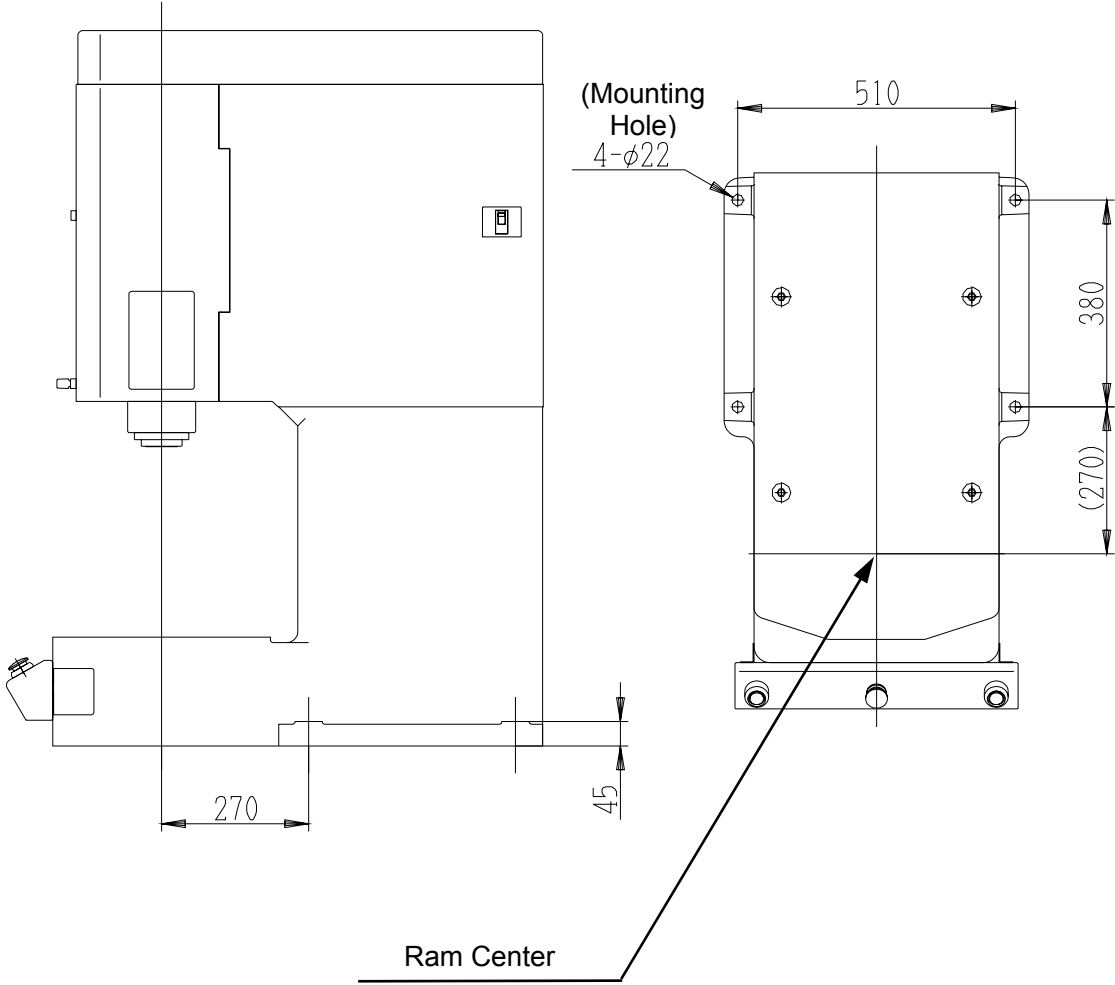
**3-2-2 JP-504/JP-1004/JP-1504, Stand-Alone Type**

Fix the Electro Press to the mounting base at the screw holes using 4 M10 hexagon socket bolts (JIS Strength 12.9, Length 45 mm or more) and washers.  
Tighten the bolts to 70 Nm tightening torque.



**3-2-3 JP-3004/JP-5004, Stand-Alone Type**

Fix the Electro Press to the mounting base at the screw holes using 4 M20 hexagon socket bolts (JIS Strength 12.9, Length 85 mm or more) and washers.  
Tighten the bolts to 390 Nm tightening torque.

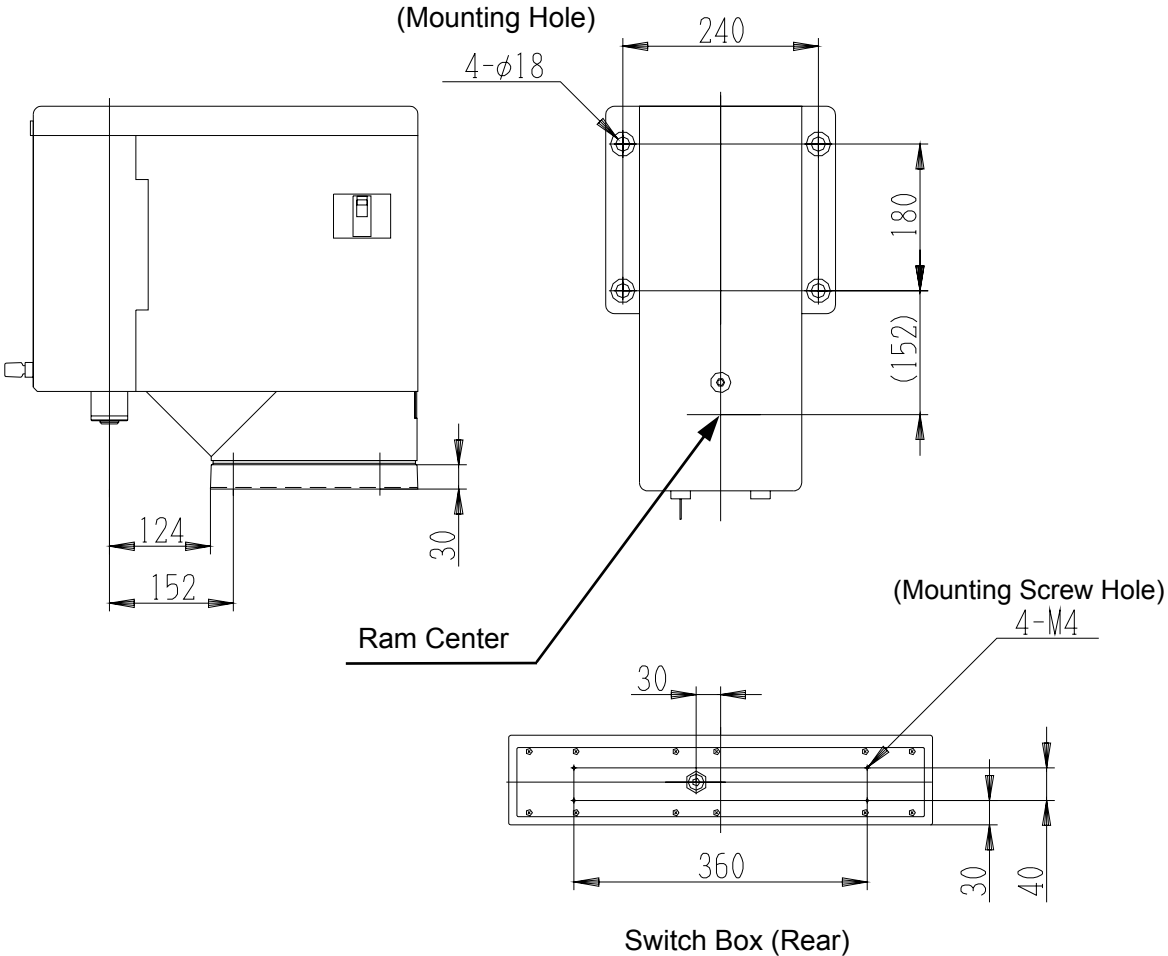


**3-2-4 JPH-104/JPH-204, Head Type**

Fix the Electro Press to the mounting base at the screw holes using 4 M16 hexagon socket bolts (JIS Strength 12.9, Length 65 mm or more) and washers.

Tighten the bolts to 200 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.

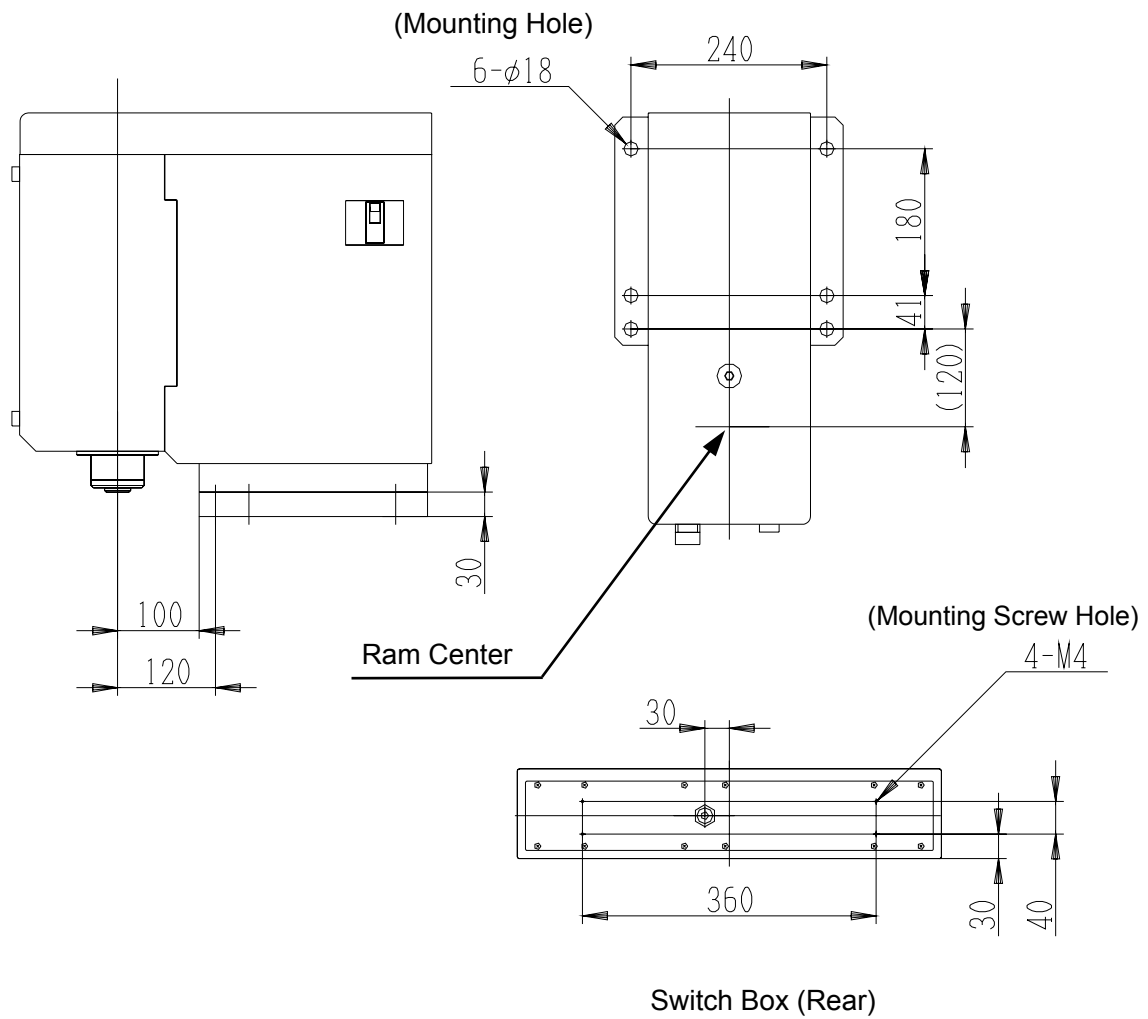


### 3-2-5 JPH-504/JPH-1004, Head Type

Fix the Electro Press to the mounting base at the screw holes using 6 M16 hexagon socket bolts (JIS Strength 12.9, Length 65 mm or more) and washers.

Tighten the bolts to 200 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.



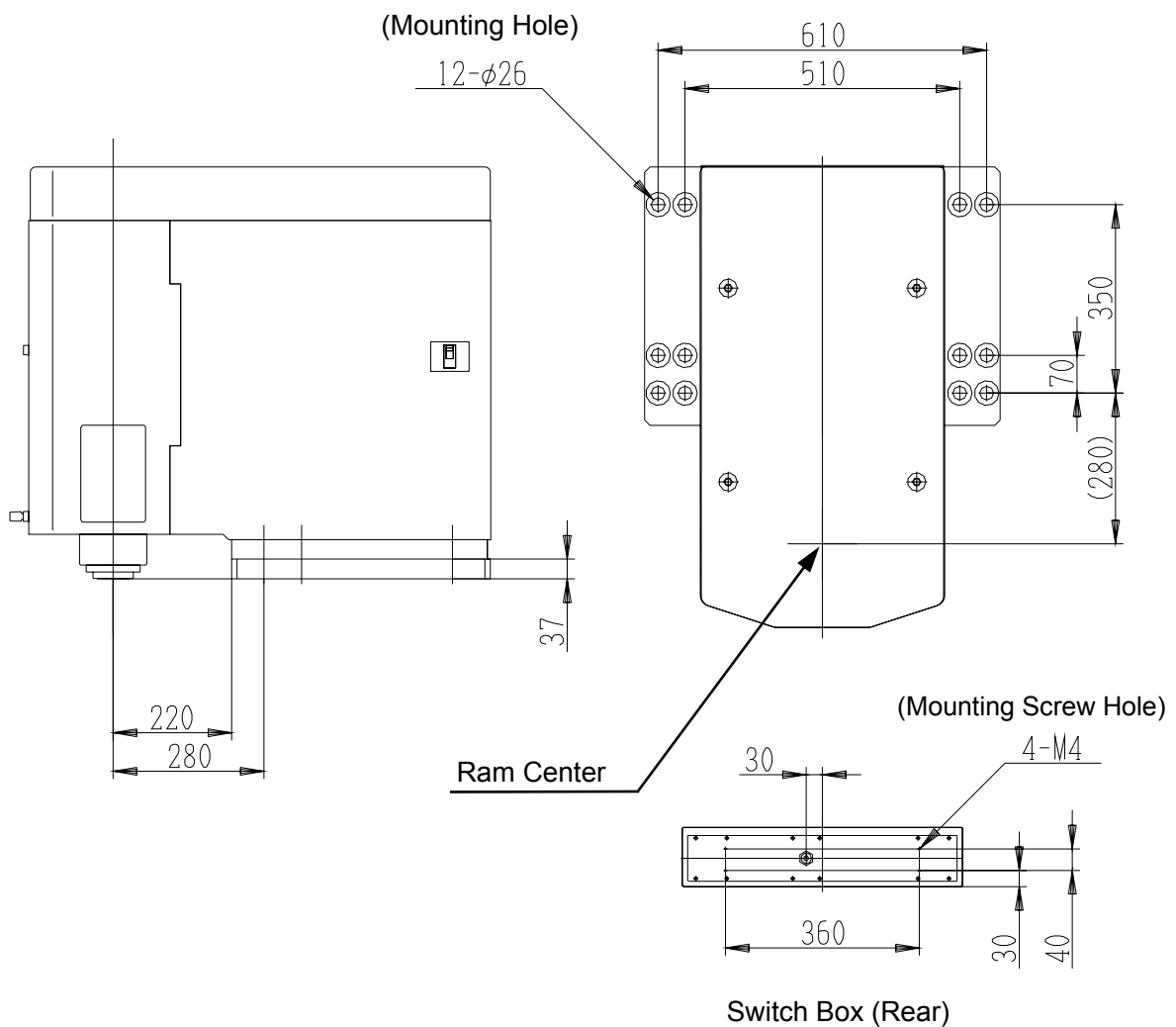


### 3-2-6 JPH-3004/JPH-5004, Head Type

Fix the Electro Press to the mounting base at the screw holes using 12 M24 hexagon socket bolts (JIS Strength 12.9, Length 85 mm or more) and washers.

Tighten the bolts to 650 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.

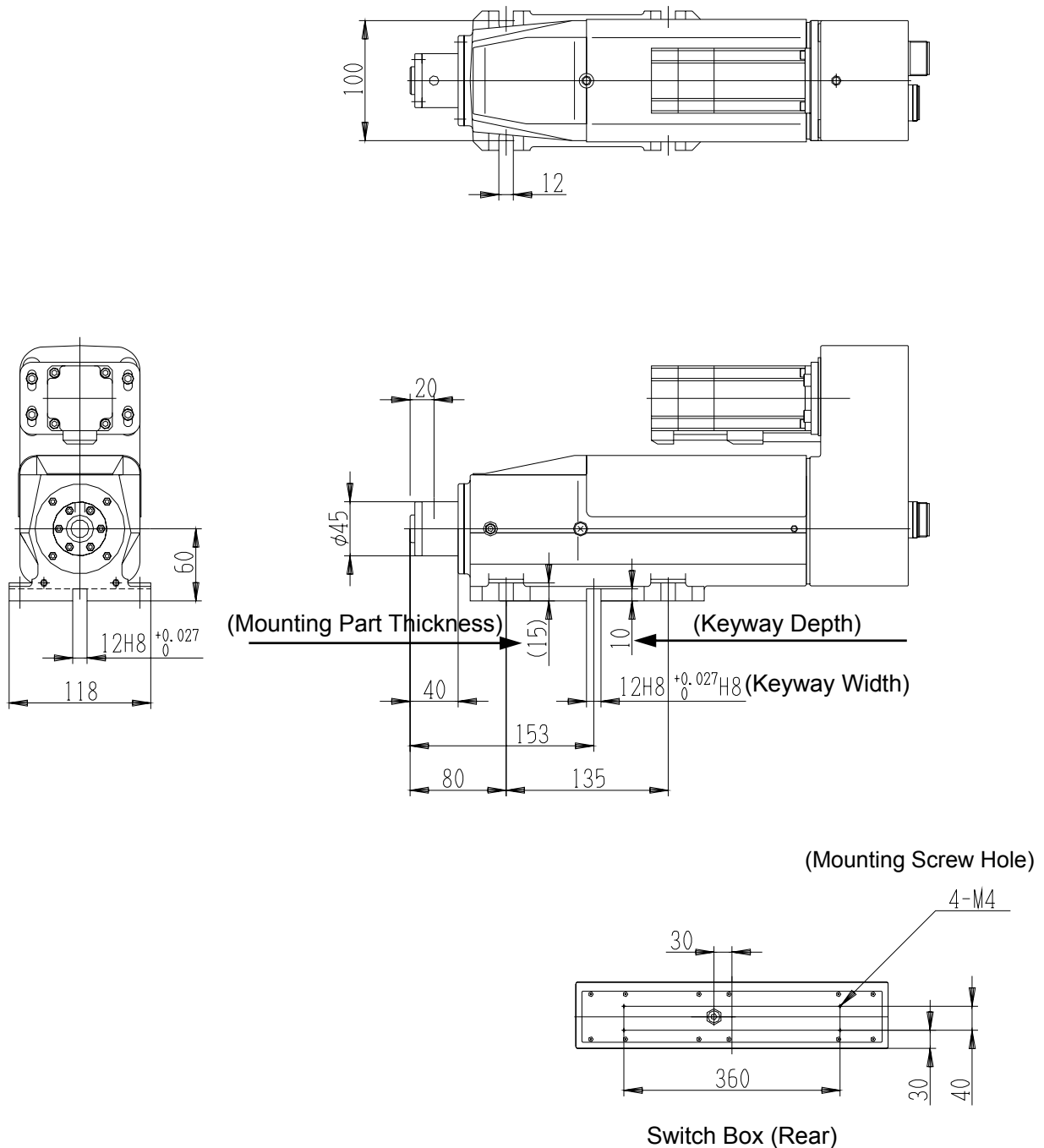


### 3-2-7 JPU-104/JPU-204, Unit Type

Use the keyway provided on the bottom of the Electro Press to eliminate thrust play with a pin matched to the keyway width.

Fix the Electro Press to the mounting base at the screw holes using 4 M10 hexagon socket bolts (JIS Strength 12.9, Length 35 mm or more) and washers. Tighten the bolts to 70 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.

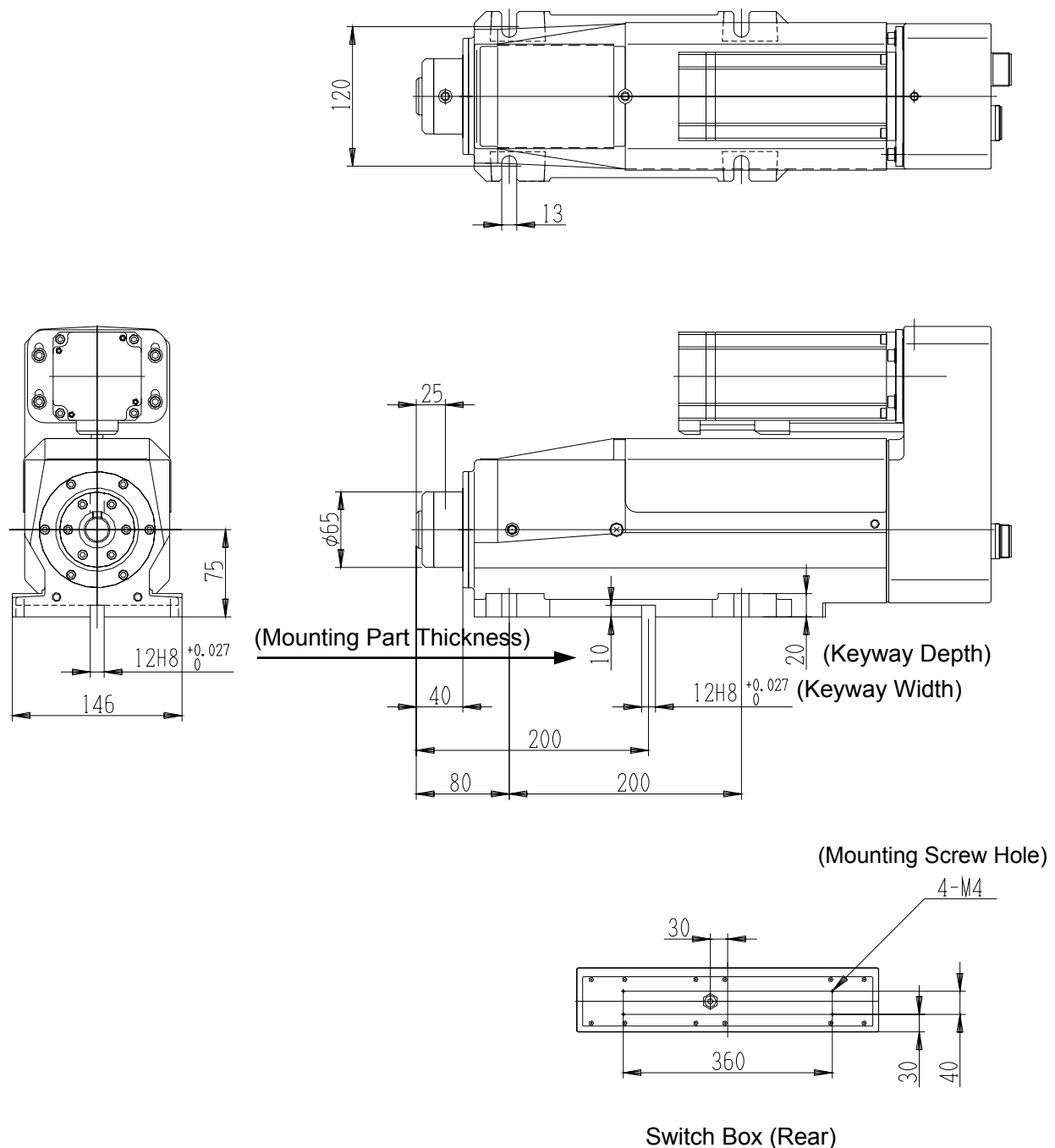


### 3-2-8 JPU-504/JPU-1004, Unit Type

Use the keyway provided on the bottom of the Electro Press to eliminate thrust play with a pin matched to the keyway width.

Fix the Electro Press to the mounting base at the screw holes using 4 M12 hexagon socket bolts (JIS Strength 12.9, Length 45 mm or more) and washers. Tighten the bolts to 120 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.

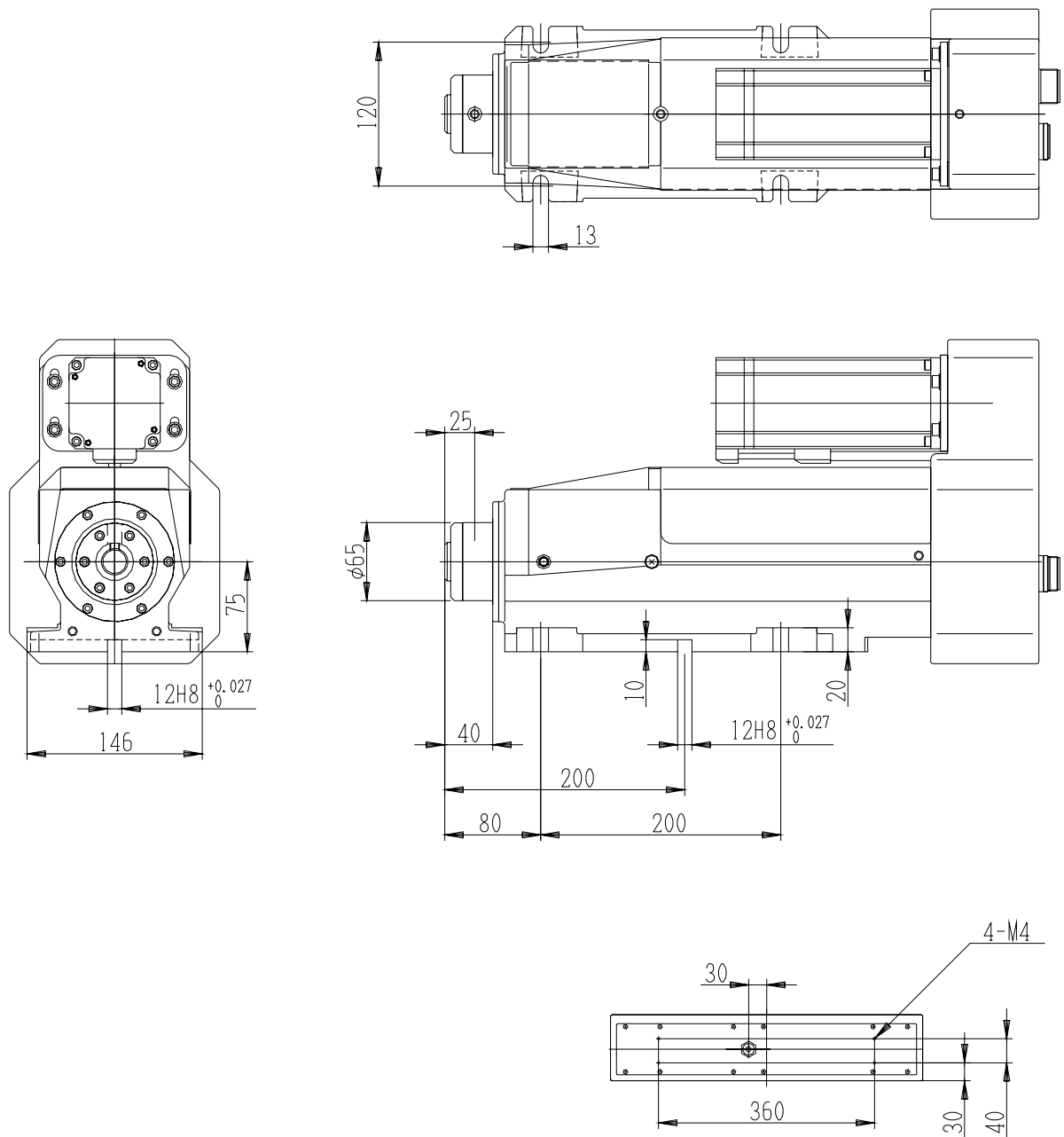


### 3-2-9 JPU-1504, Unit Type

Use the keyway provided on the bottom of the Electro Press to eliminate thrust play with a pin matched to the keyway width.

Fix the Electro Press to the mounting base at the screw holes using 4 M12 hexagon socket bolts (JIS Strength 12.9, Length 45 mm or more) and washers. Tighten the bolts to 120 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.

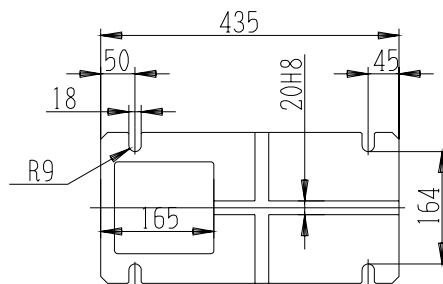
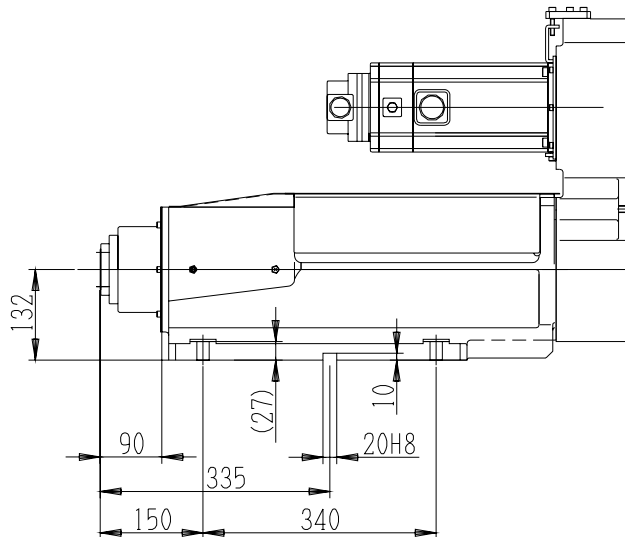
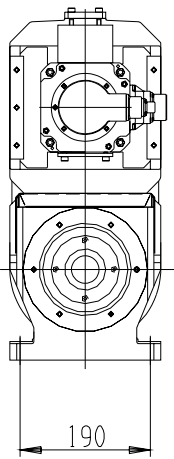
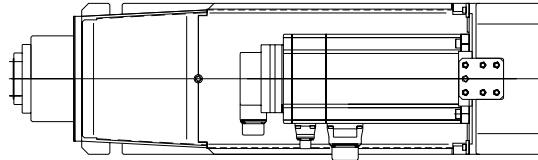


### 3-2-10 JPU-3004/JPU-5004, Unit Type

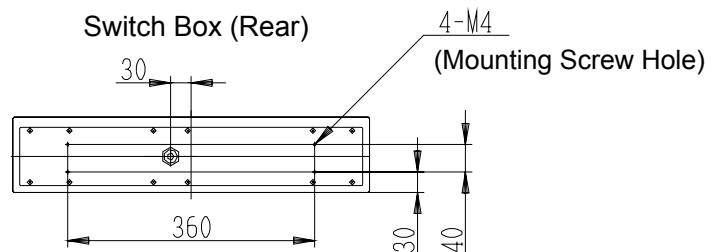
Use the keyway provided on the bottom of the Electro Press to eliminate thrust play with a pin matched to the keyway width.

Fix the Electro Press to the mounting base at the screw holes using 4 M16 hexagon socket bolts (JIS Strength 12.9, Length 60 mm or more) and washers. Tighten the bolts to 200 Nm tightening torque.

Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.



Switch Box (Rear)

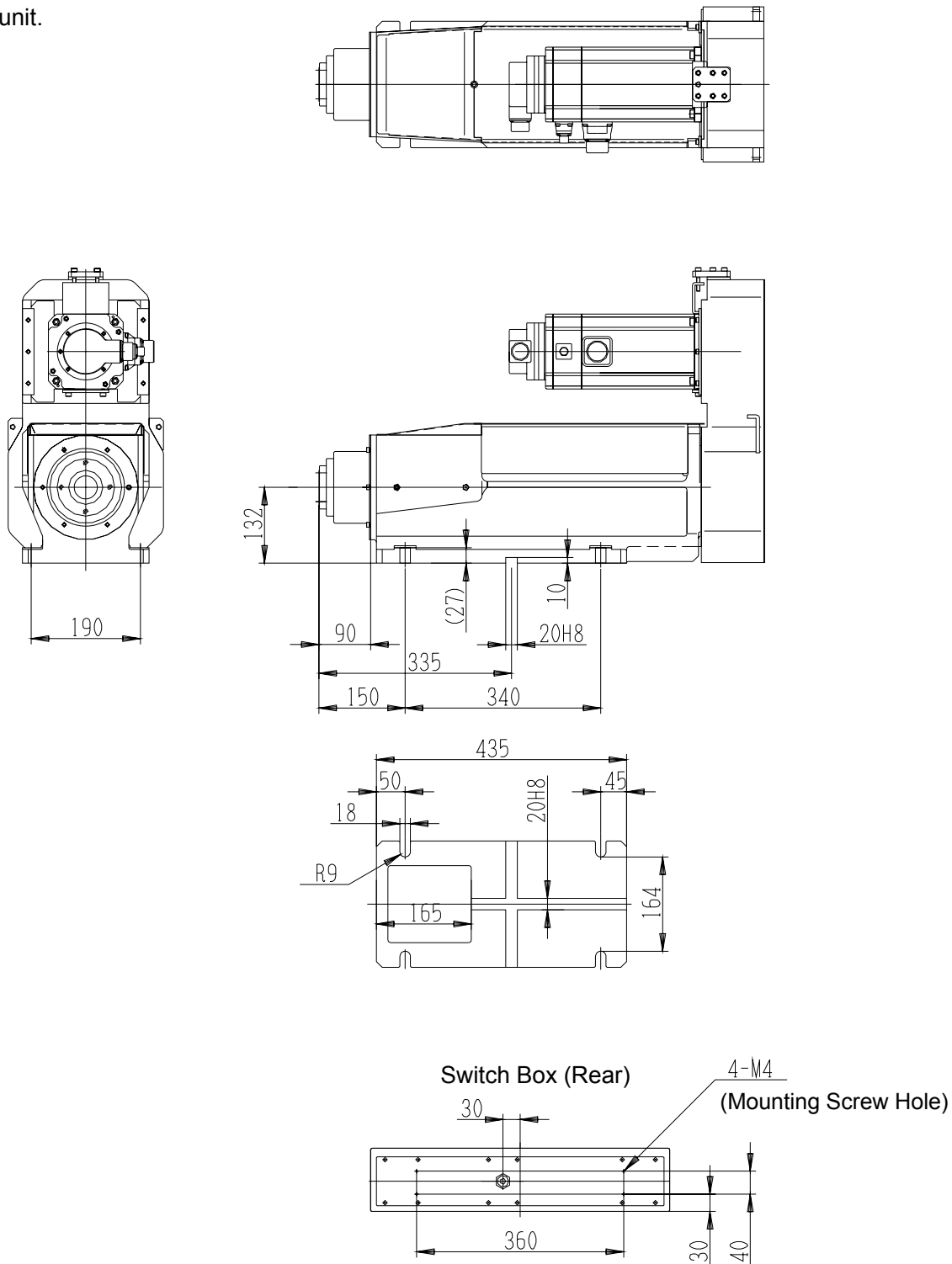


### 3-2-11 JPU-8004, Unit Type

Use the keyway provided on the bottom of the Electro Press to eliminate thrust play with a pin matched to the keyway width.

Fix the Electro Press to the mounting base at the screw holes using 4 M16 hexagon socket bolts (JIS Strength 12.9, Length 60 mm or more) and washers. Tighten the bolts to 200 Nm tightening torque.

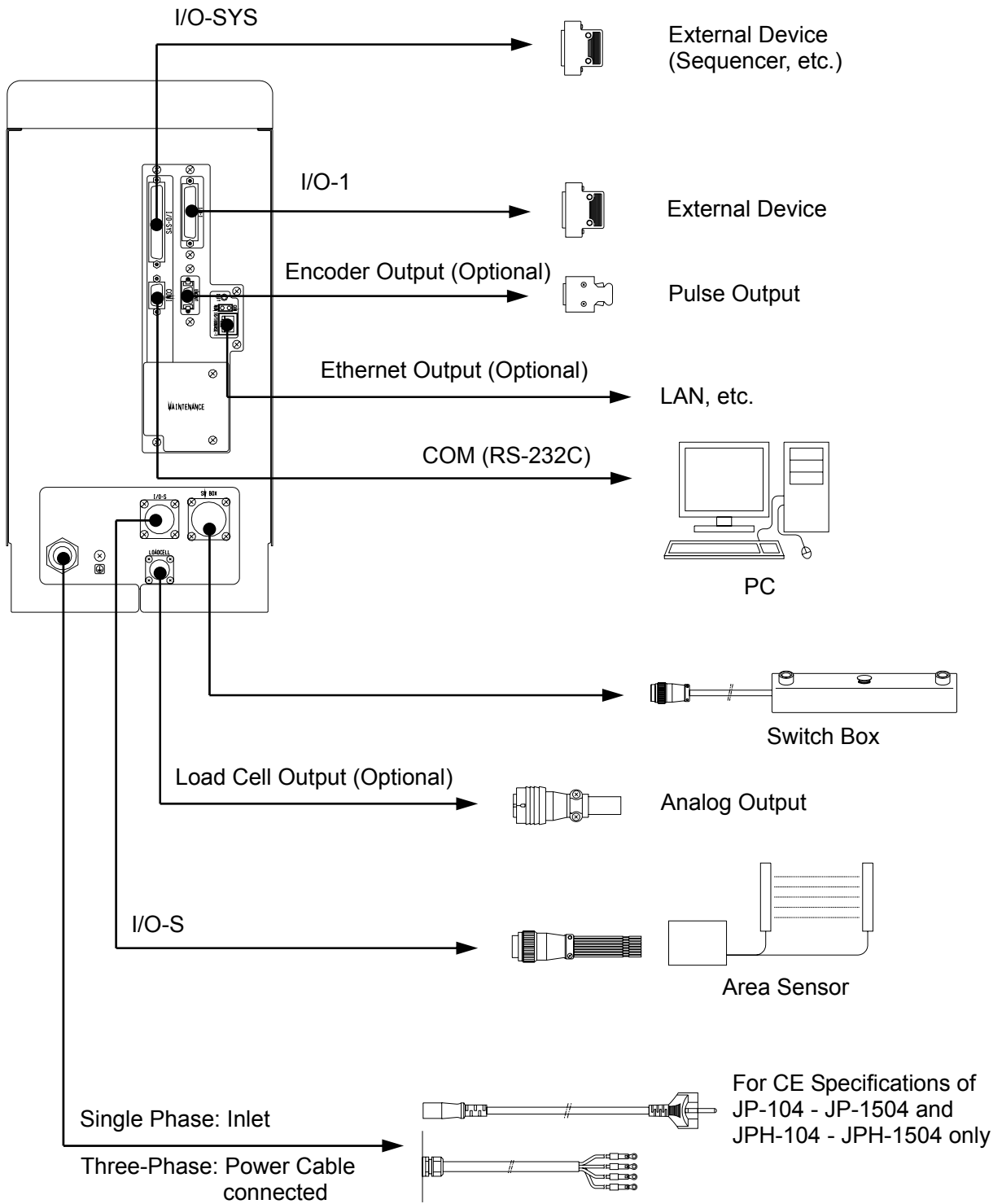
Fit the switch box to the Electro Press with 4 screws (M4) using the screw holes on the rear of the unit.



### 3-3 Wiring

#### 3-3-1 Stand-Alone/Head Type

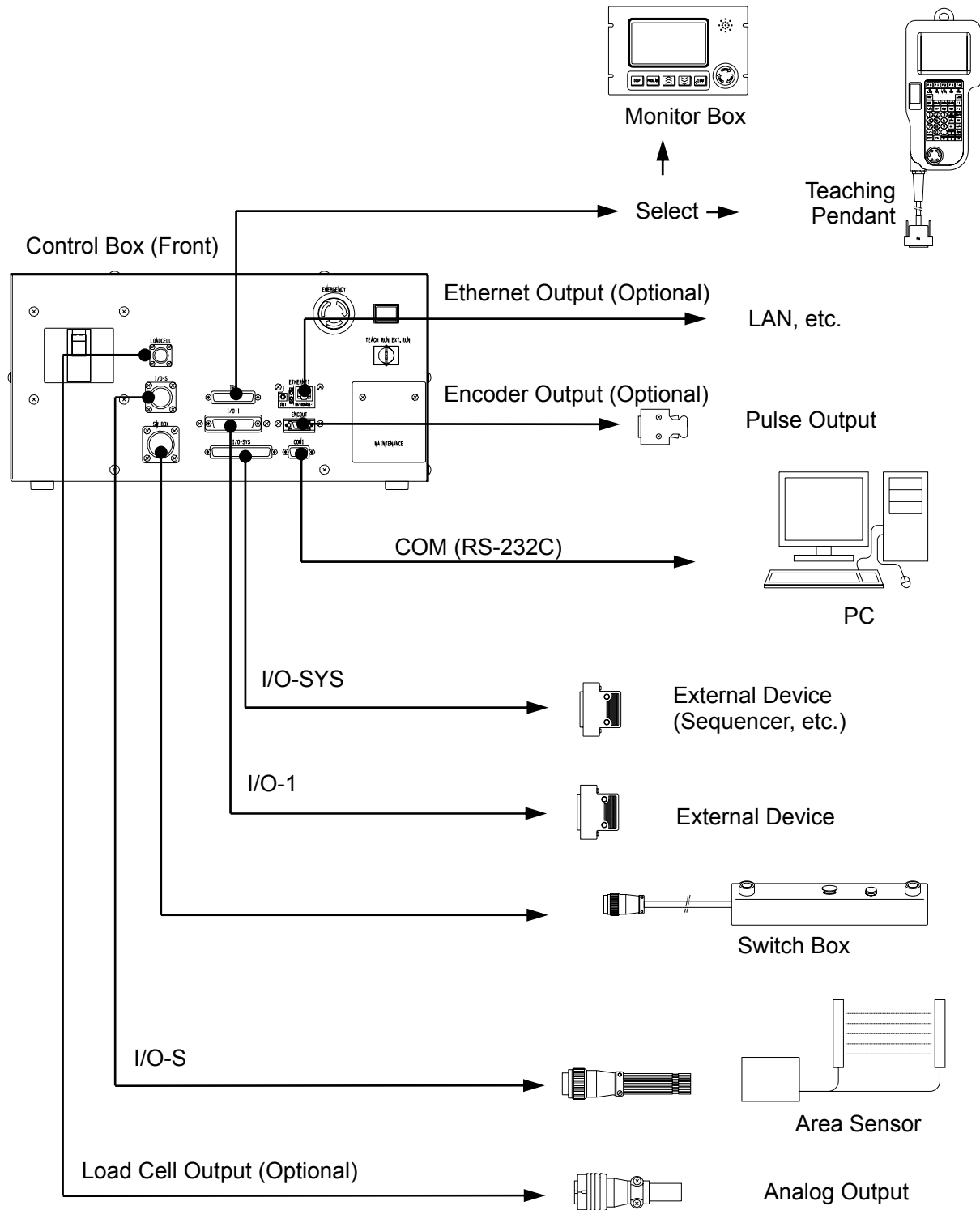
Connect the cables according to the following wiring diagram.



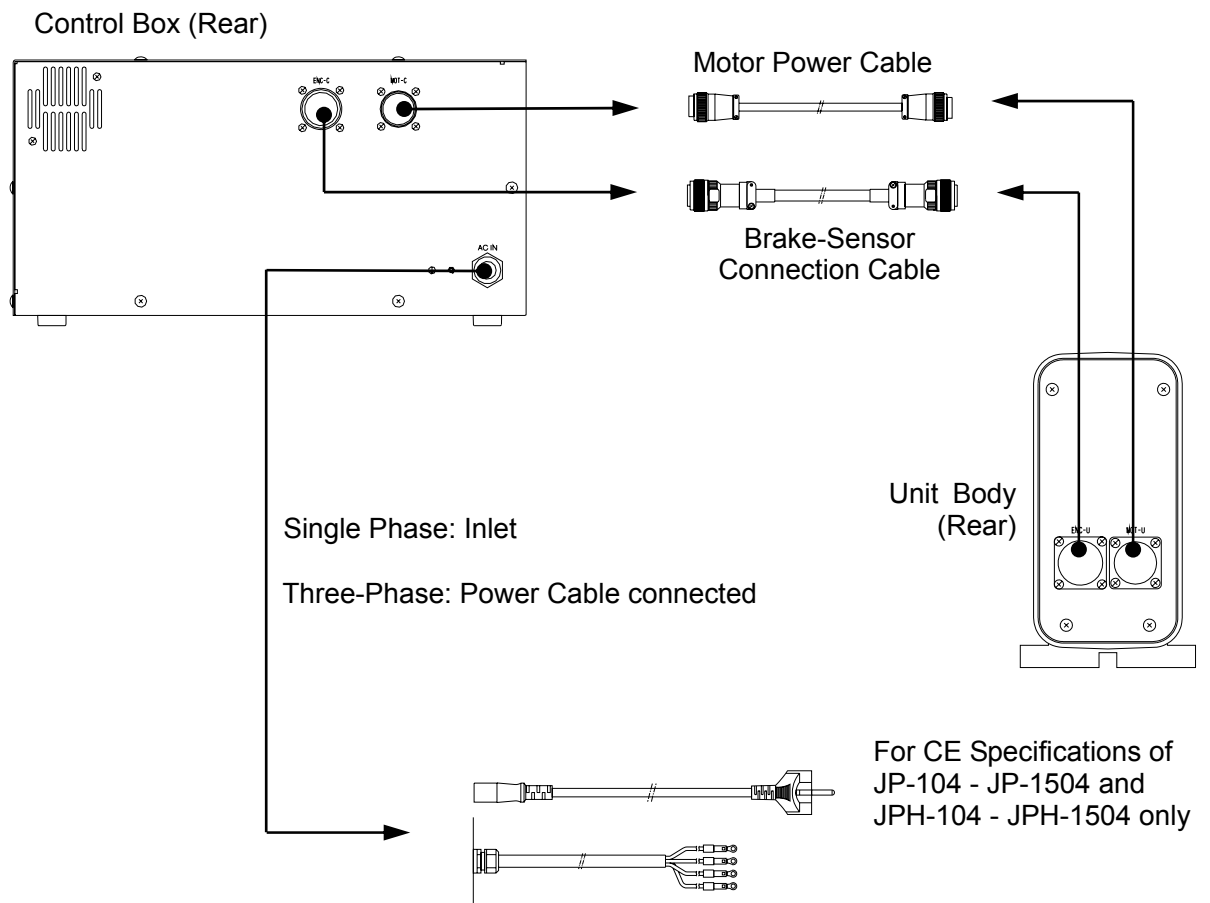
### 3-3-2 Unit Type

(JPU-104 – JPU-1504)

Connect the cables according to the following wiring diagram.

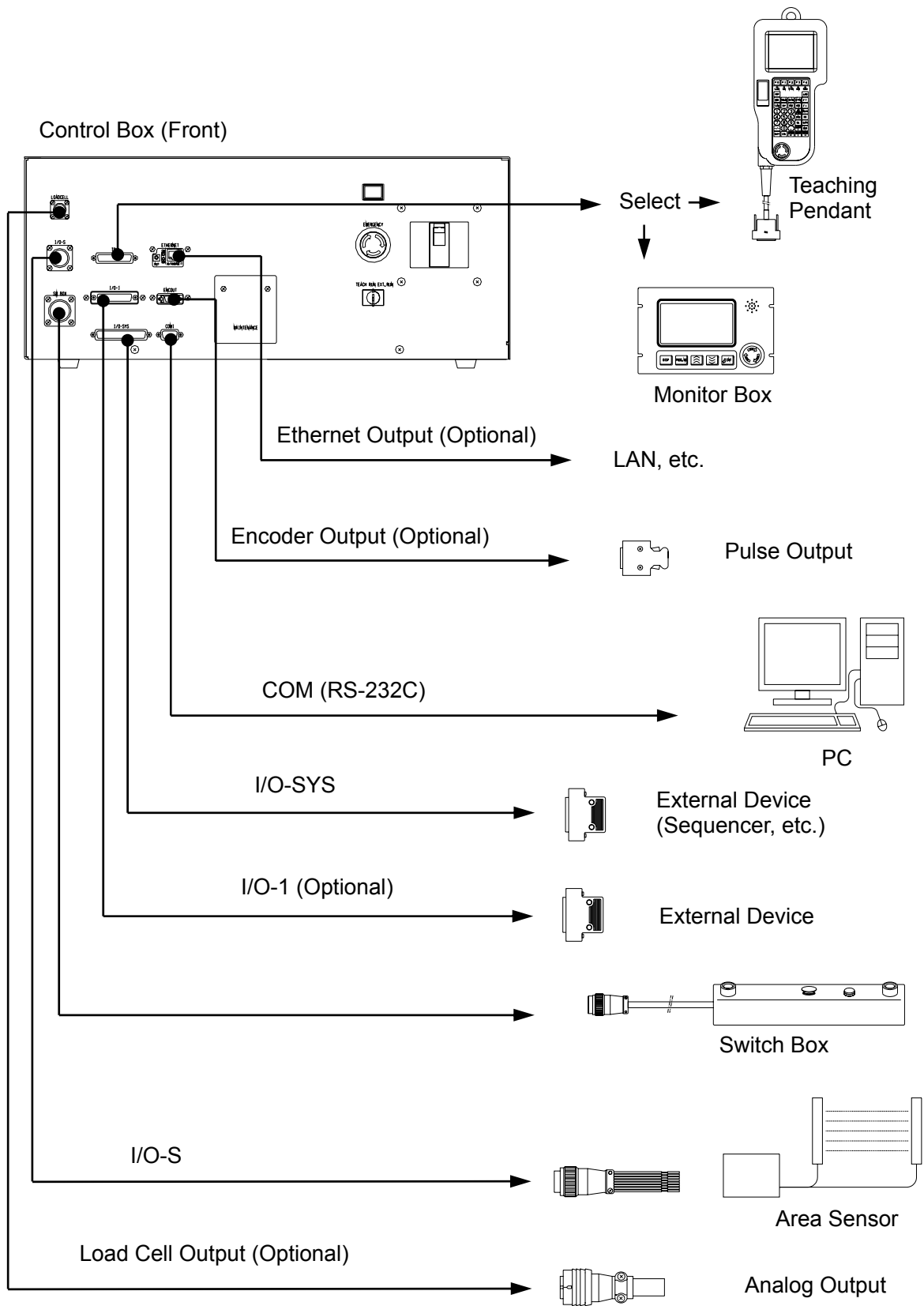


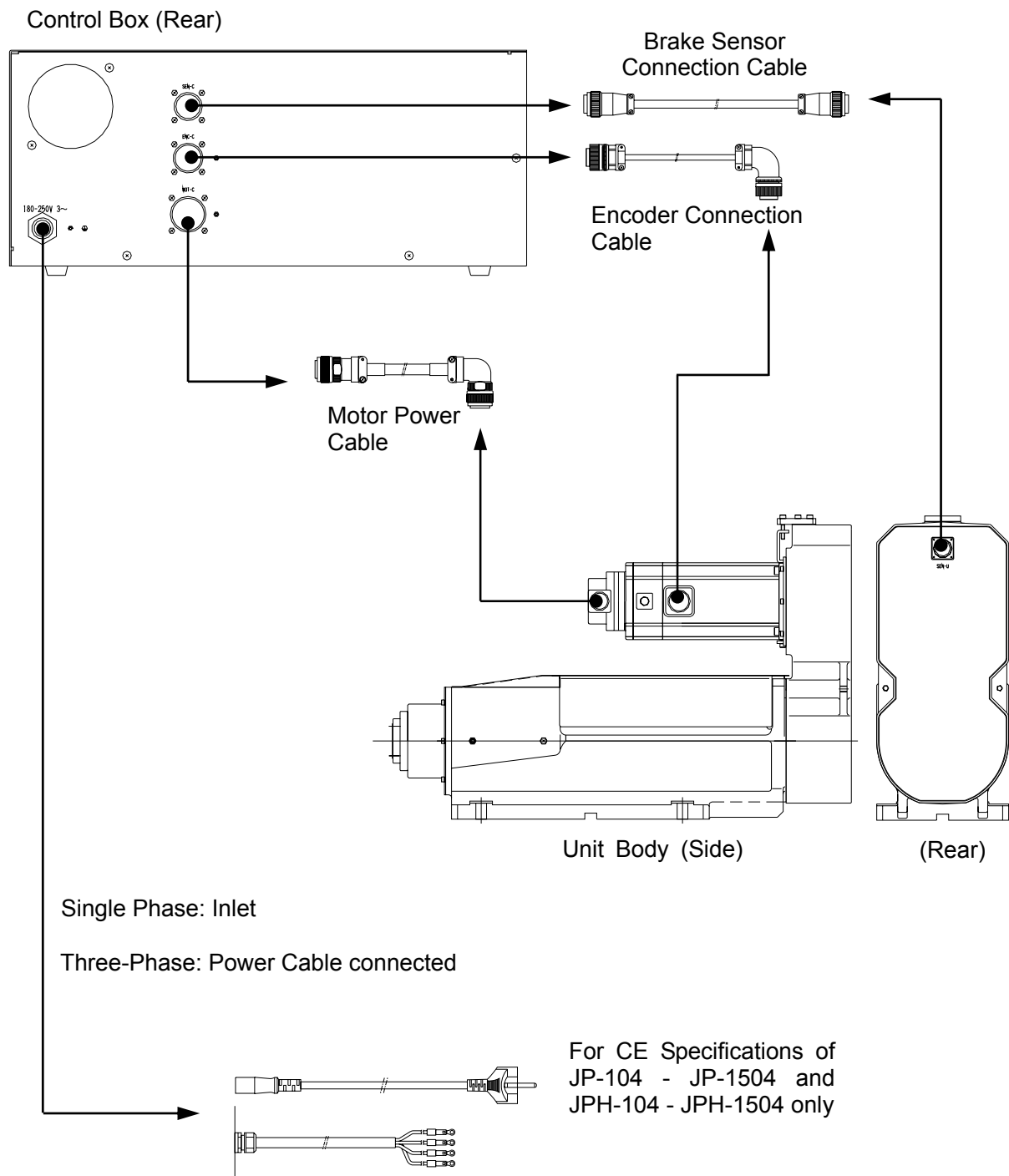




(JPU-3004 – JPU-8004)

Connect the cables according to the following wiring diagram.

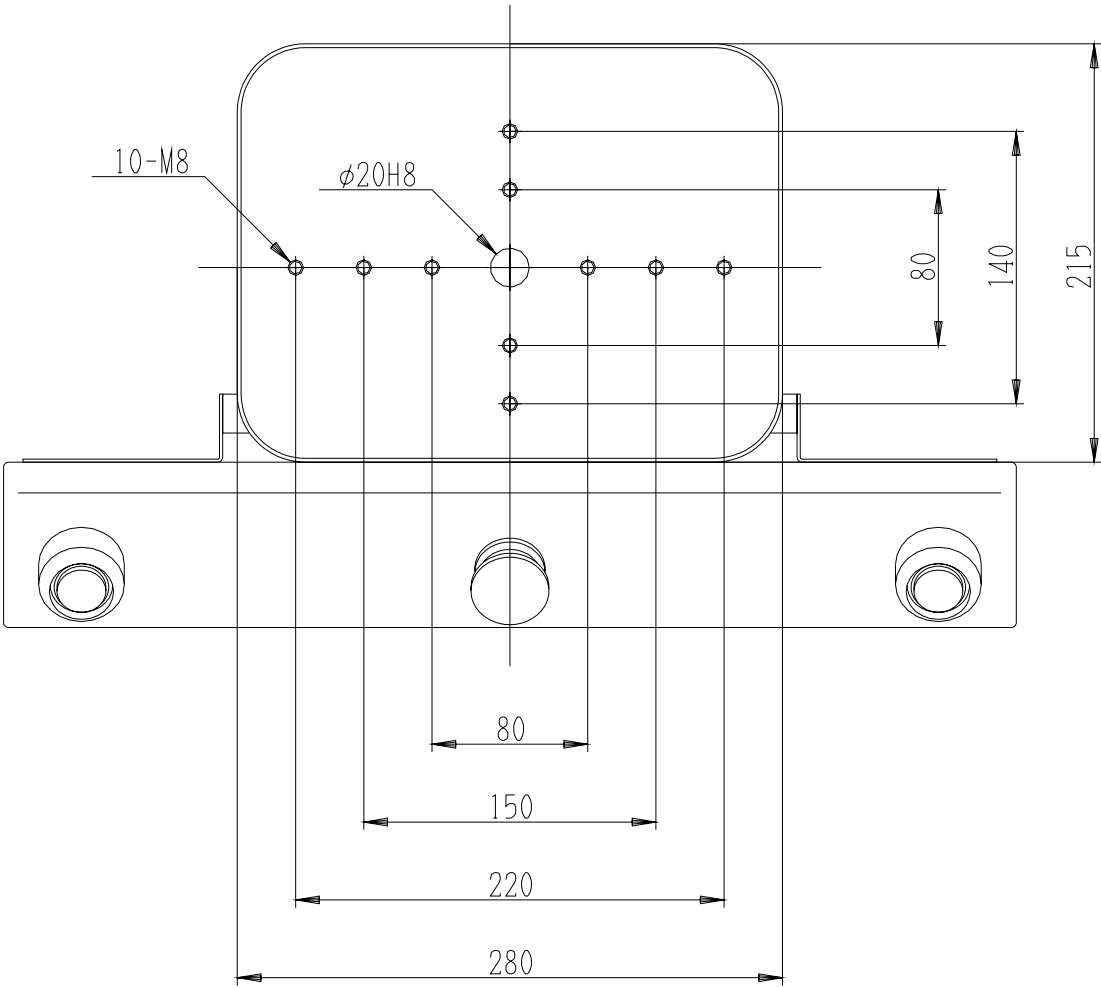




**3-4 Base Dimensions**

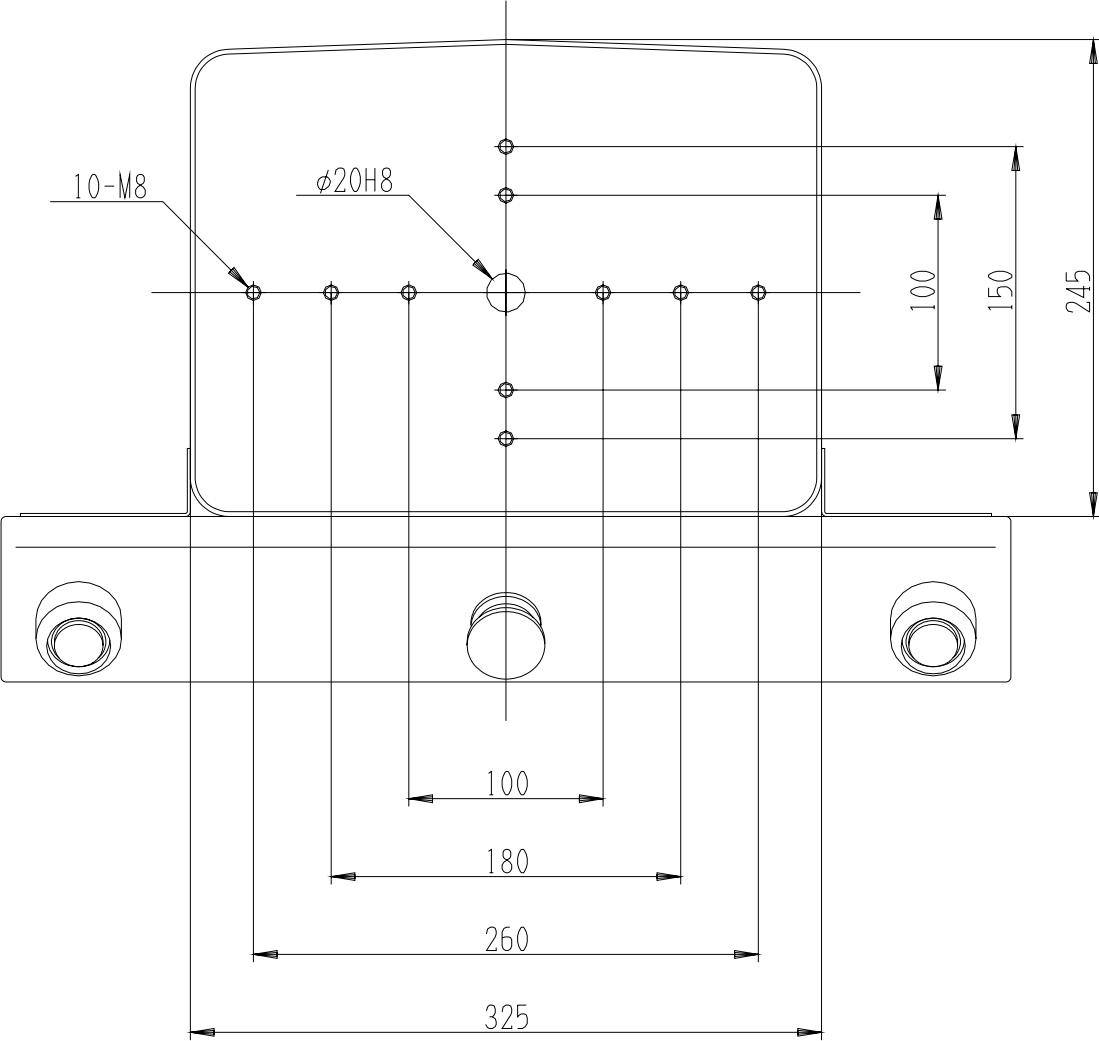
**3-4-1 JP-104/JP-204, Stand-Alone Type**

Use the following base dimensions when making workpiece fixtures to attach to the base plate.



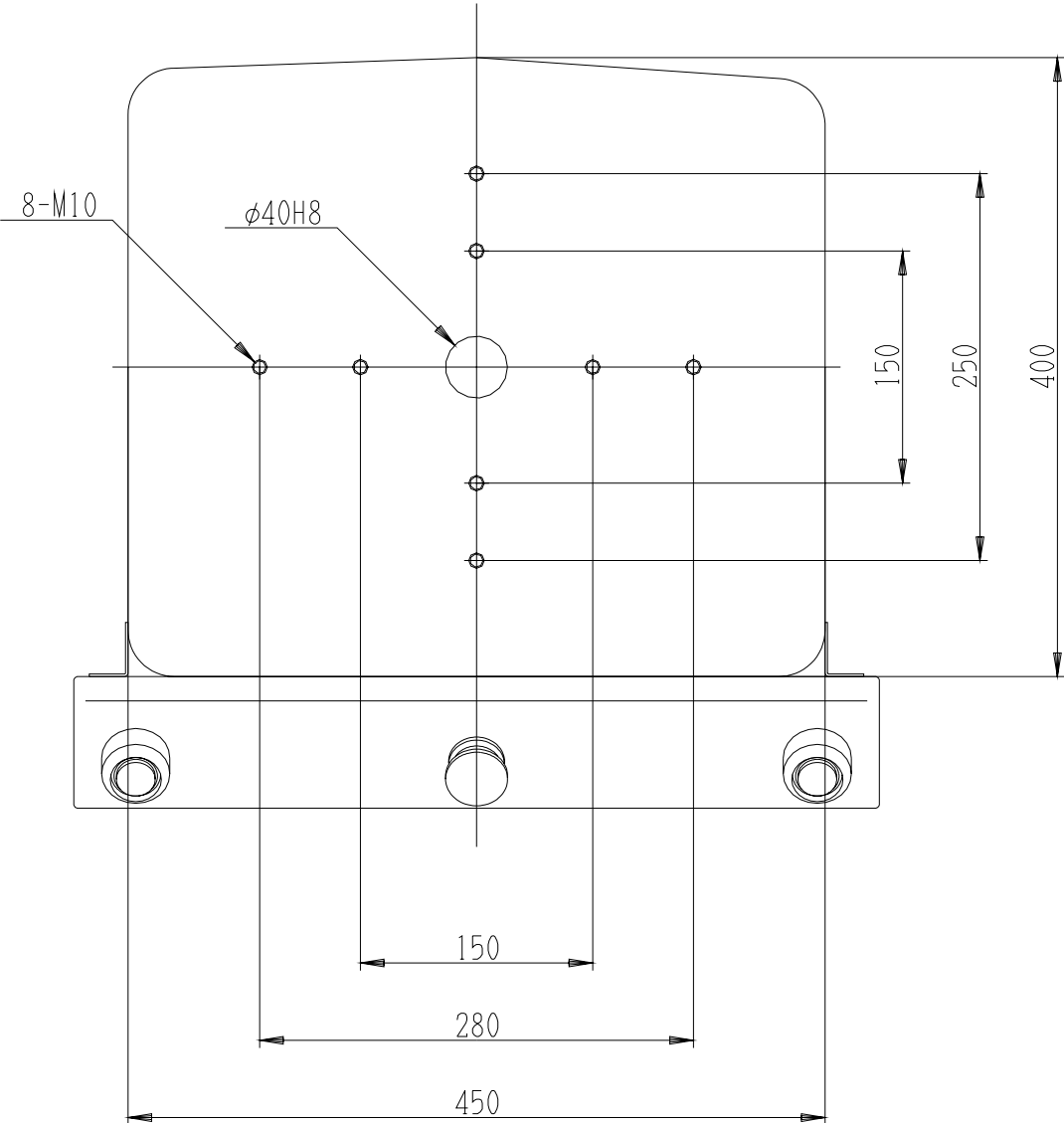
**3-4-2 JP-504/JP-1004/JP-1504, Stand-Alone Type**

Use the following base dimensions when making workpiece fixtures to attach to the base plate.



**3-4-3 JP-3004/JP-5004, Stand-Alone Type**

Use the following base dimensions when making workpiece fixtures to attach to the base plate.



### 3-5 Ram Mounting Jig

#### 3-5-1 JP, JPH, JPU-104/204

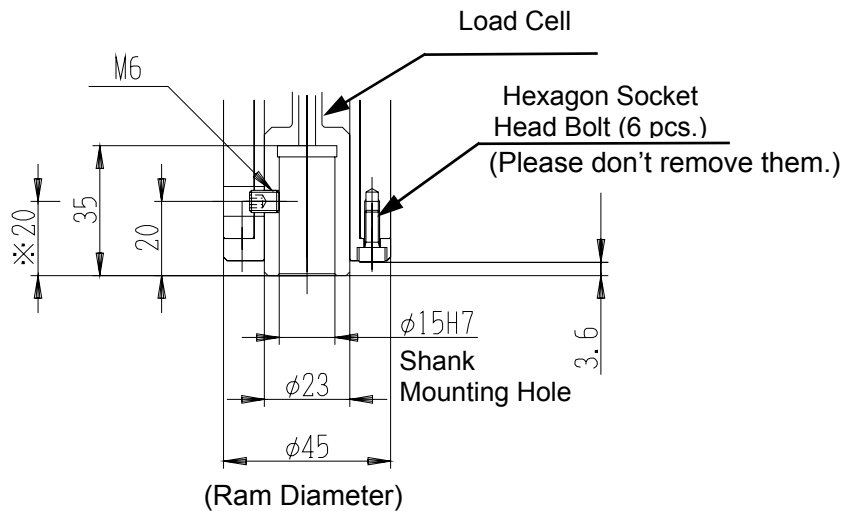


The ram is equipped with a load cell, which senses the load through the edge of the shank mounting hole. Attach the jig to the ram without applying hard shocks or stress to the load cell.

- The Shape of Shank Mounting Part:

The following illustration shows the size of shank mounting part.

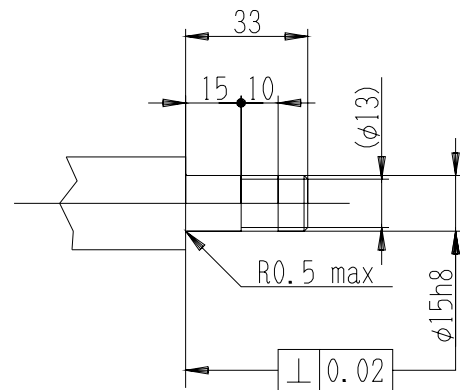
Fix the shank with a screw (size M6.)



If the ram mounting jig is larger than the ram, make it smaller so that it fits within the dimension marked by an asterisk (\*) in the above illustration.

- The Shape of Shank for Ram Mounting Jig:

Make the shank part of the jig with reference to the illustration to right.



- Weight of Ram Mounting Jig:

If the ram is set up to ascend vertically and the jig is too heavy, it may cause the ram to descend when the power supply is turned off. Also, the load cell may be damaged since it tends to receive uneven stress.

Make the ram mounting jig as light as possible. The maximum weight of the jig should be 1 % or less of the maximum load pertaining to each model.

When you use the ram moving horizontally, design the jig so that it does not apply too much moment load to the shank.



The 6 hexagon bolts on the tip of the ram are for attaching the load cell. Do not use these bolts to fix the jig, or it will tend to change the load. If the jig has to be mounted in some other way than using the shank mounting hole, contact Janome Sewing Machine Co., Ltd. (Industrial Automation Systems Division.)

### 3-5-2 JP, JPH, JPU-504/1004/1504

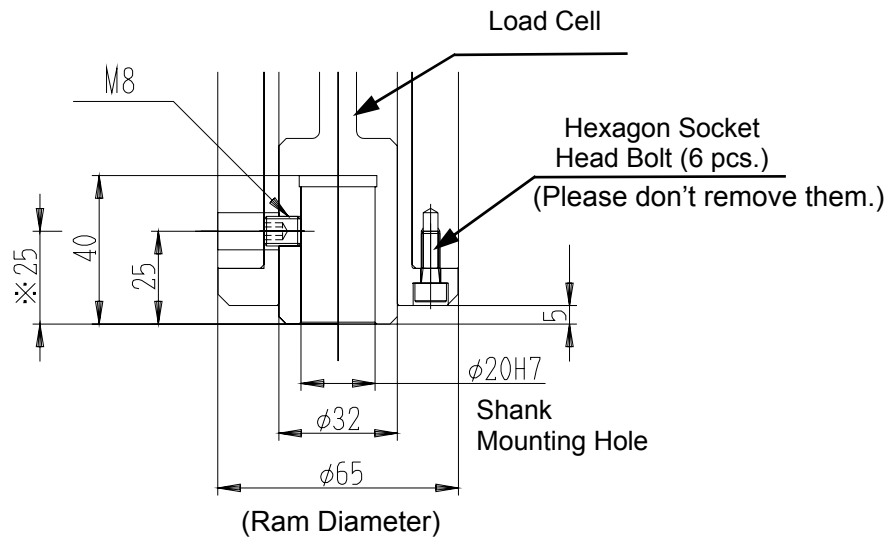


The ram is equipped with a load cell, which senses the load through the edge of the shank mounting hole. Attach the jig to the ram without applying hard shocks or stress to the load cell.

- The Shape of Shank Mounting Part:

The following illustration shows the size of shank mounting part.

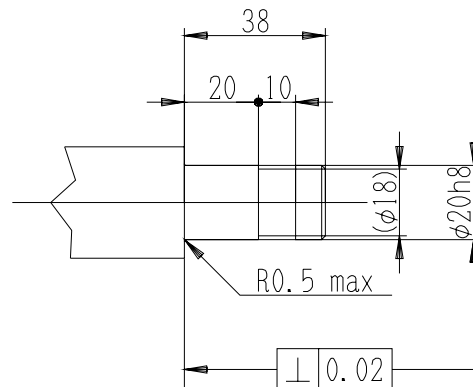
Fix the shank with a screw (size M8.)



If the ram mounting jig is larger than the ram, make it smaller so that it fits within the dimension marked by an asterisk (\*) in the above illustration.

- The Shape of Shank for Ram Mounting Jig:

Make the shank part of the jig with reference to the illustration to right.



- Weight of Ram Mounting Jig:

If the ram is set up to ascend vertically and the jig is too heavy, it may cause the ram to descend when the power supply is turned off. Also, the load cell may be damaged since it tends to receive uneven stress.

Make the ram mounting jig as light as possible. The maximum weight of the jig should be 1 % or less of the maximum load pertaining to each model.

When you use the ram moving horizontally, design the jig so that it does not apply too much moment load to the shank.



The 6 hexagon bolts on the tip of the ram are for attaching the load cell. Do not use these bolts to fix the jig, or it will tend to change the load. If the jig has to be mounted in some other way than using the shank mounting hole, contact Janome Sewing Machine Co., Ltd. (Industrial Automation Systems Division.)

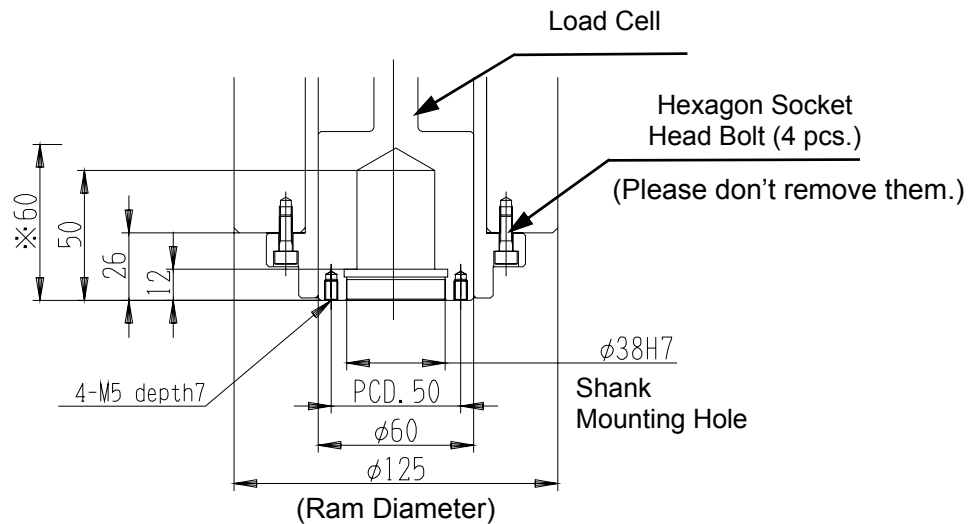


### 3-5-3 JP, JPH, JPU-3004/5004, JPU-8004



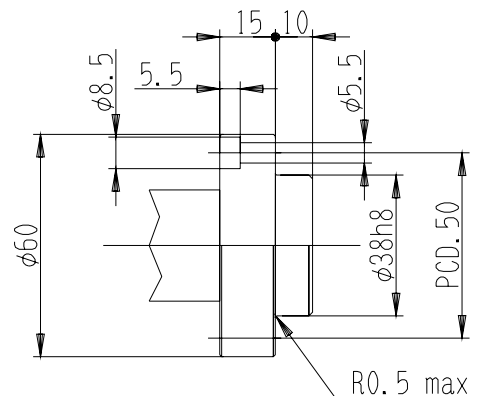
The ram is equipped with a load cell, which senses the load through the edge of the shank mounting hole. Attach the jig to the ram without applying hard shocks or stress to the load cell.

- The Shape of Shank Mounting Part:  
The following illustration shows the size of shank mounting part.  
Fix the shank with a screw (size M5.)



If the ram mounting jig is larger than the ram, make it smaller so that it fits within the dimension marked by an asterisk (\*) in the above illustration.

- The Shape of Shank for Ram Mounting Jig:  
Make the shank part of the jig with reference to the illustration to right.



- Weight of Ram Mounting Jig:  
If the ram is set up to ascend vertically and the jig is too heavy, it may cause the ram to descend when the power supply is turned off. Also, the load cell may be damaged since it tends to receive uneven stress.  
Make the ram mounting jig as light as possible. The maximum weight of the jig should be 3 % or less of the maximum load pertaining to each model.  
When you use the ram moving horizontally, design the jig so that it does not apply too much moment load to the shank.



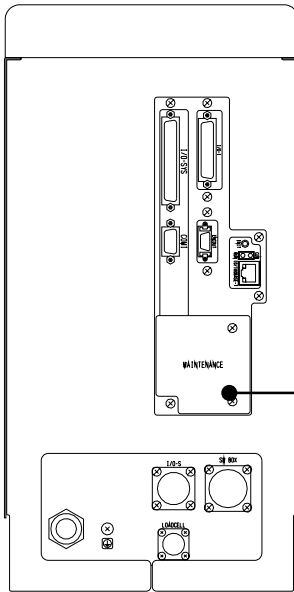
The 4 hexagon bolts on the tip of the ram are for attaching the load cell. Do not use these bolts to fix the jig, or it will tend to change the load. If the jig has to be mounted in some other way than using the shank mounting hole, contact Janome Sewing Machine Co., Ltd. (Industrial Automation Systems Division.)

### 3-5-4 Switching I/O-SYS and I/O-1 Power Supply

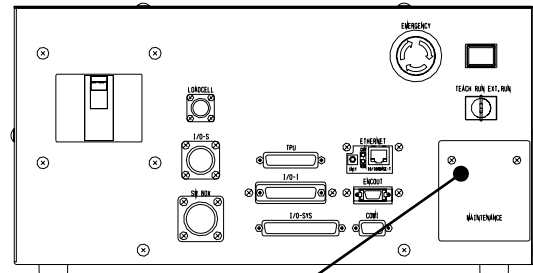
Turn OFF the Electro Press and remove the cover on the rear body (Stand-alone/Head type) or the cover on the control box (front) (Unit type) to adjust the following switches.

Switch	Display	IN	EXT
I/O-SYS Power Selection Switch		Internal Power Supply	External Power Supply
I/O-1 Power Selection Switch		Internal Power Supply	External Power Supply

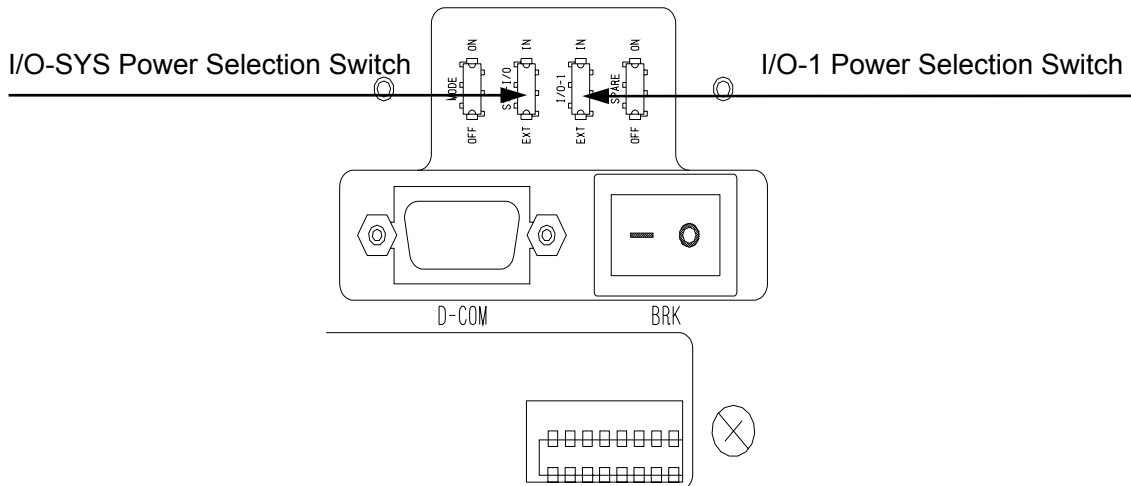
Body (Rear),  
Stand-Alone/Head Type



Control Box (Front), Unit Type



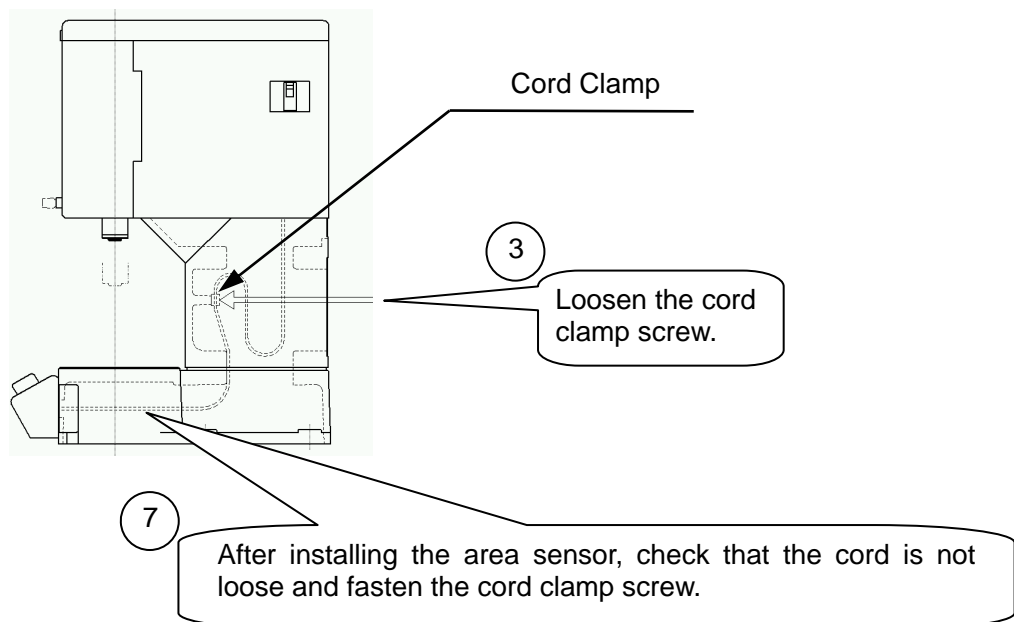
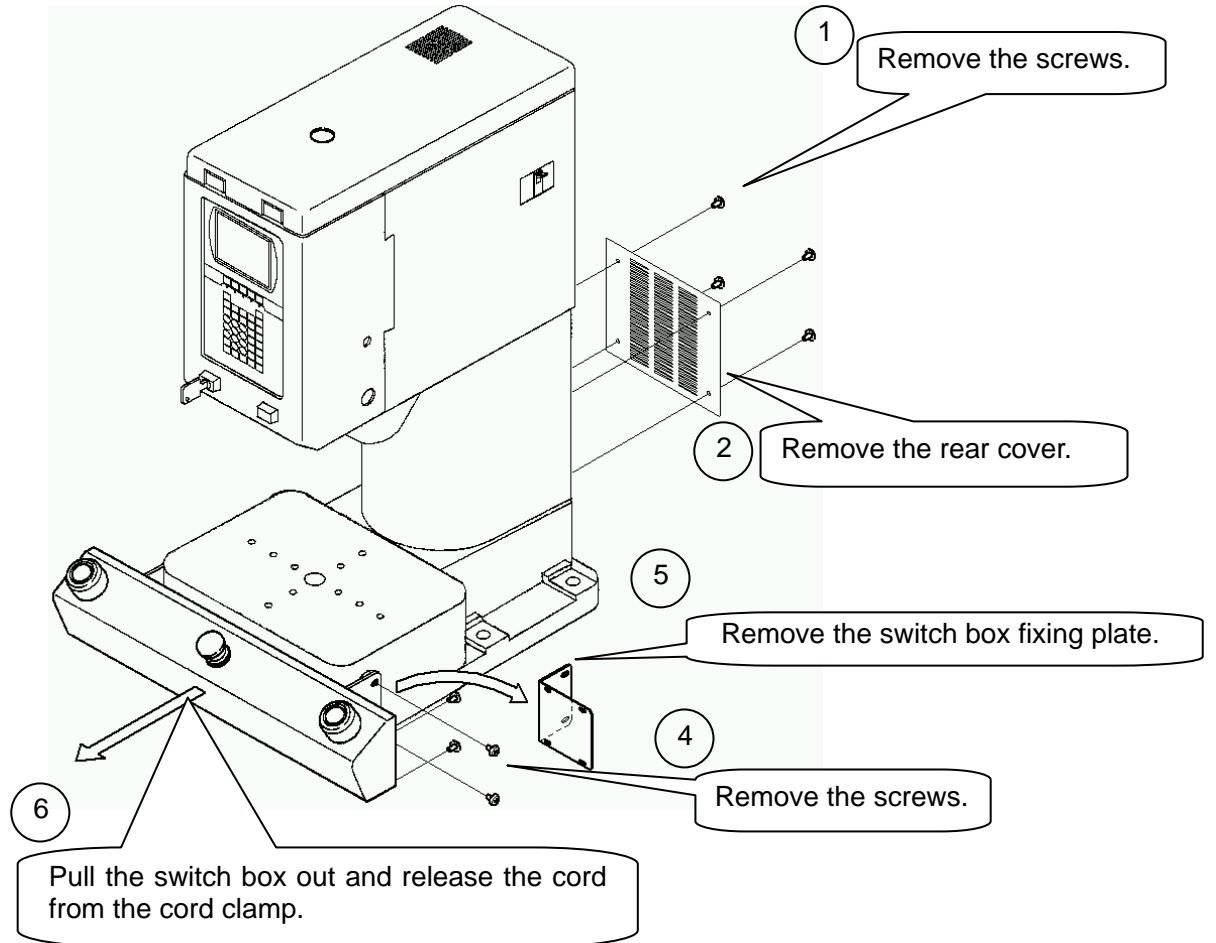
#### Inside the Cover



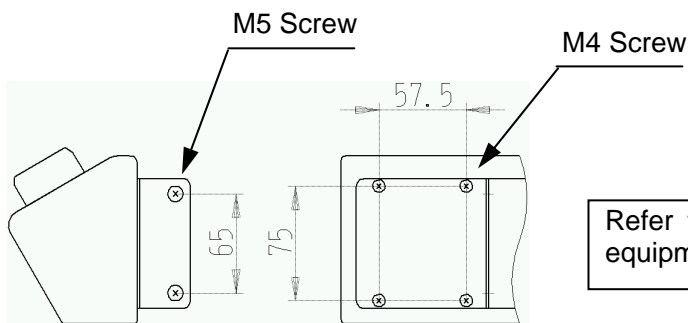
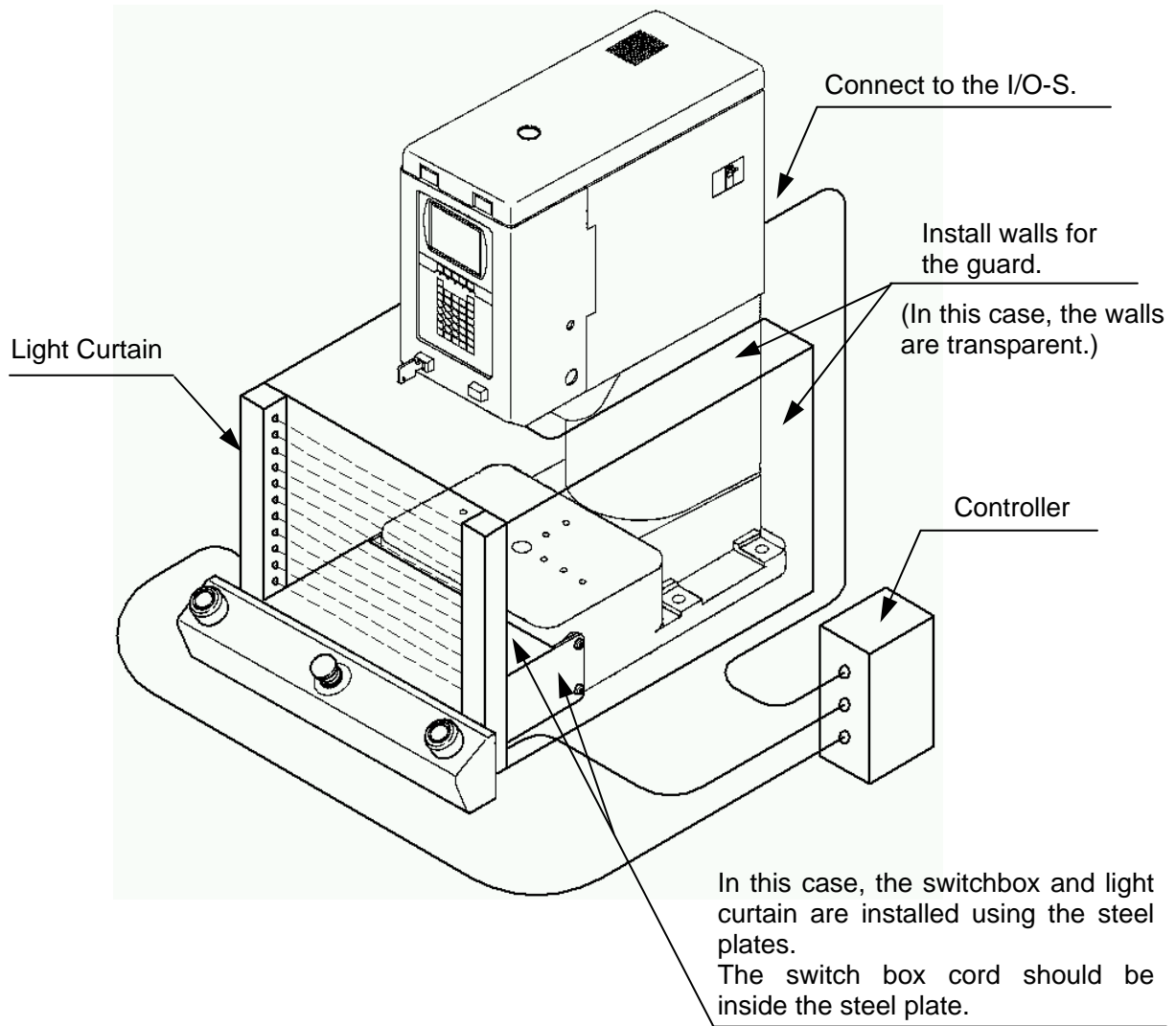
### 3-6 Safeguard Installation

<How to install a safeguard>

Remove the switch box and install the area sensor and safeguard.



• Area Sensor (Light Curtain) Installation



Refer to the diagram on the left to create equipment necessary for the safeguard.

- Minimum Safe Distance from Danger  
(In this case, the distance from the light curtain detection area)

Install the light curtain with reference to the formula below.

$$\mathbf{S = K \times T + C}$$

S: Safety Distance (the minimum safe distance)

K: Approach Speed (speed at which the hand enters) (mm/s)  
(calculated using “ 1600 mm/sec”)

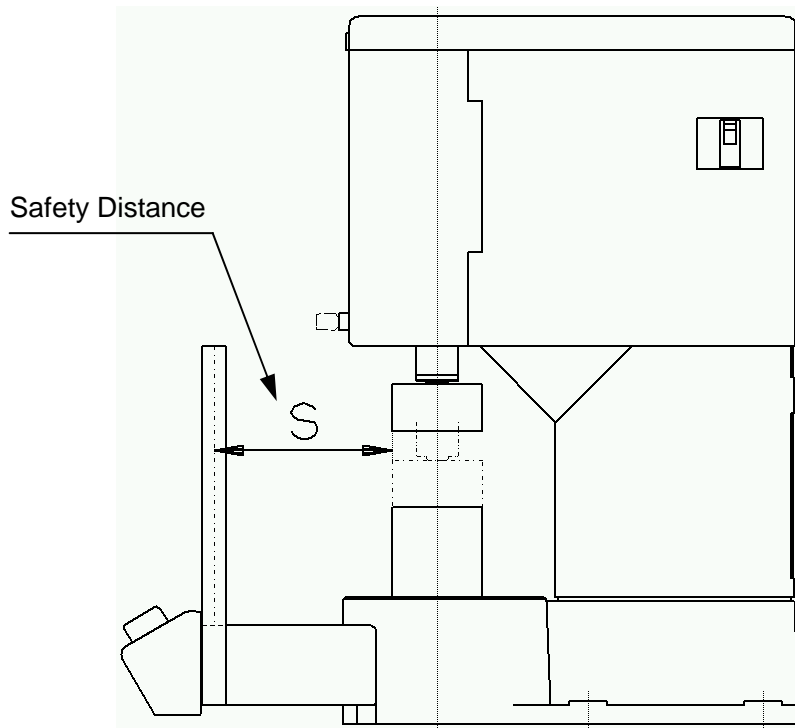
T: Reaction Time of the whole system (sec)

$$T = T_m + T_s$$

T<sub>m</sub>: Machine reaction time

T<sub>s</sub>: Sensor reaction time

C: Additional distance corresponding to the light curtain detection ability



Please refer to the table below for KT<sub>m</sub> values for  $\mathbf{S = KT_m \times KT_s + C}$  .

Model	KT <sub>m</sub> (mm)
JP104, 204	160
JP504, 1004	240
JP3004, 5004	320

## 4. HOW TO BACK UP UNIQUE NUMBER AND INSTALL SETTING DATA

Each machine has a unique number and its own initial setting data.  
Be sure to back up this data since it may be necessary when replacing internal board due to malfunction.

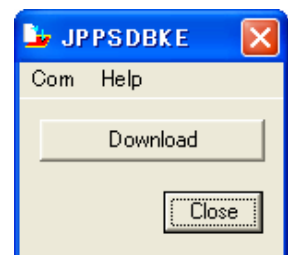
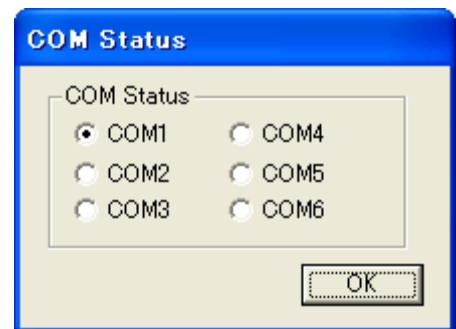


**Be sure to back up the unique number and initial setting data of the machine.**  
It may be necessary when replacing internal board.

### <Preparation>

Check that the machine is properly connected to your PC, turn the machine and the PC ON and copy "JPPSDBKE.EXE" from the Operation Manual CD-ROM to the local disk.

1. Start up "JPPSDBKE.EXE" from the local disk. The dialog box to the right will appear.
2. Select the COM port used to connect the PC to the machine and click [OK.]
3. Click [Download] to start downloading the unique number and initial setting data of the machine.  
If you want to select another COM port, select [COM Status] from the pull-down menu [COM.]
4. After downloading is complete, save it as a new file. (It is saved with the extension ".JEB".) Click [Close] to exit "JPPSDBKE.EXE."



- Do not execute [Send C&T Data] from the pull-down menu [COM Status.]

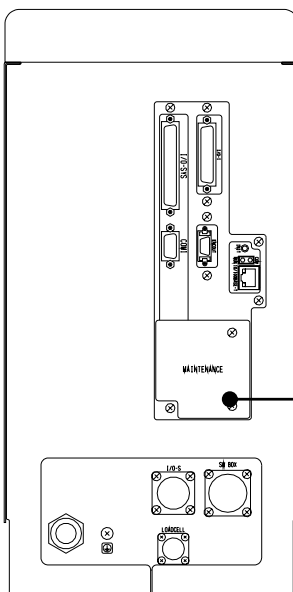
## 5. HOW TO INSTALL PRESS SYSTEM SOFTWARE

The Electro Press is controlled by built-in “Press system software.” To upgrade the press system software, follow the instructions below. (For this operation, the machine must be connected to a PC.)

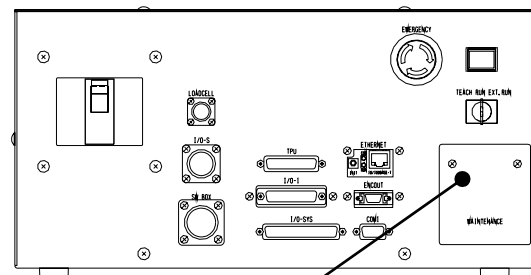
“Press system software” is included in the Operation Manual CD-ROM with the file name, JpSyp\_XXX.jsy. (“XXX” indicates the version number.)

1. Turn OFF the machine, remove the cover on the rear body (Stand-alone/Head type) or the cover on the control box (front) (Unit type.) Turn the **special mode switch** ON.

Body (Rear),  
Stand-Alone/Head Type

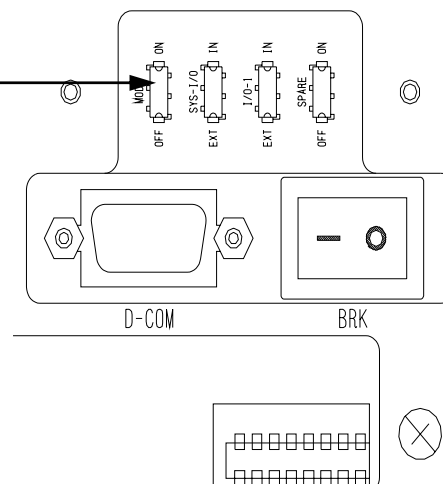


Control Box (Front), Unit Type

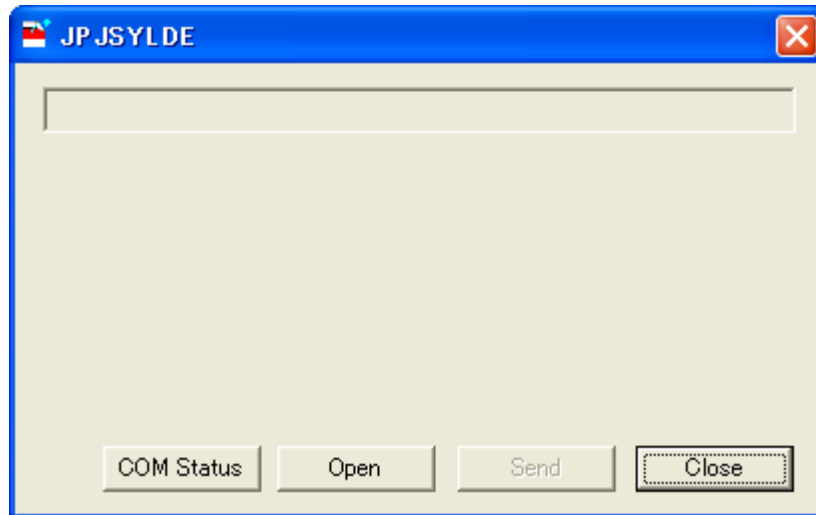


Special Mode Switch

Inside the Cover



2. Turn ON the machine again, copy the “JPJSYLDE” software included in Operation Manual CD-ROM to the local disk on the PC and start it up.
3. Select the communication port status of your PC which is connected to the machine and then click [OK.]
4. Select [Open] on the dialog box and specify the press system software to be downloaded. Then click the  button.



5. After data sending is complete, turn the machine OFF, turn **the special mode switch** OFF and then reattach the cover.
- If you are using “JP Designer”, the same operation can also be executed by selecting [Send Press System Software] from the [Press] pull-down menu.

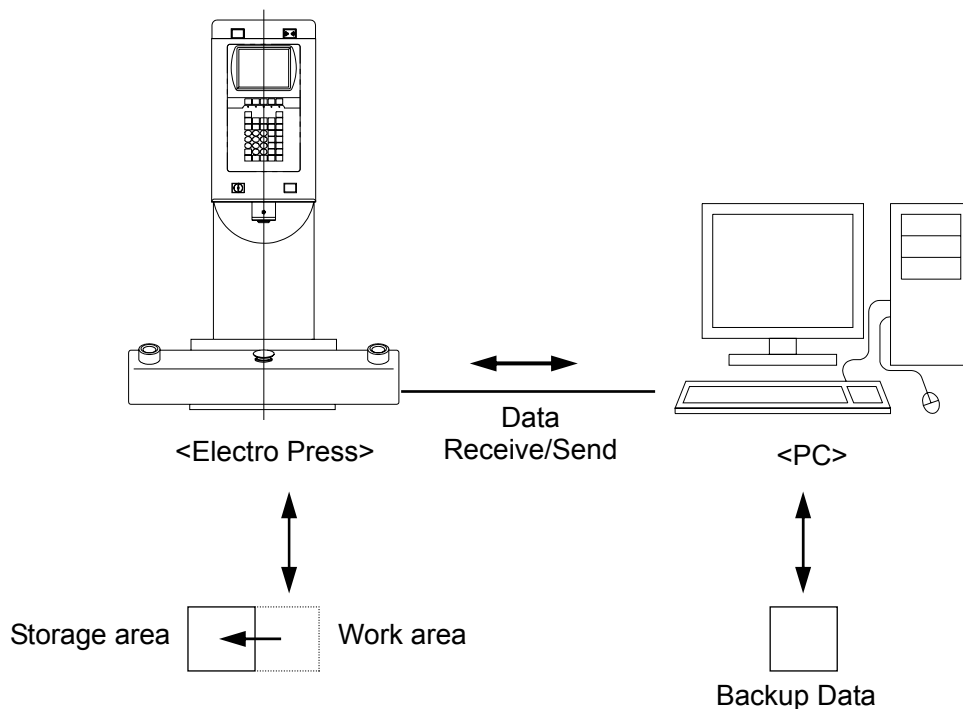


## 6. TEACHING DATA BACKUP

Back up data in case of accident.

To create backup data, start up the program “JP Designer Limited Edition” included in the Operation Manual CD-ROM. Retrieve data from the machine and save the retrieved data in a file.

The teaching data is sent and received between the machine and PC as a unit of data. You cannot send or receive one particular program only.



The machine has a data storage area and a work area. When you start up the machine, the teaching data in the storage area will be copied to the work area. The copied data is used for running and teaching. The data in the work area will be deleted when the power to the machine is turned OFF.

When retrieving data from the machine, it comes from the work area. After sending data from the PC to the machine, the sent data will be saved in the storage area automatically.

- If you are using “JP Designer”, the same operation can also be executed by selecting [Receive Data] from the [Communication] pull-down menu.

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**Fax: +81-426-61-6302**

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6 September, 2005