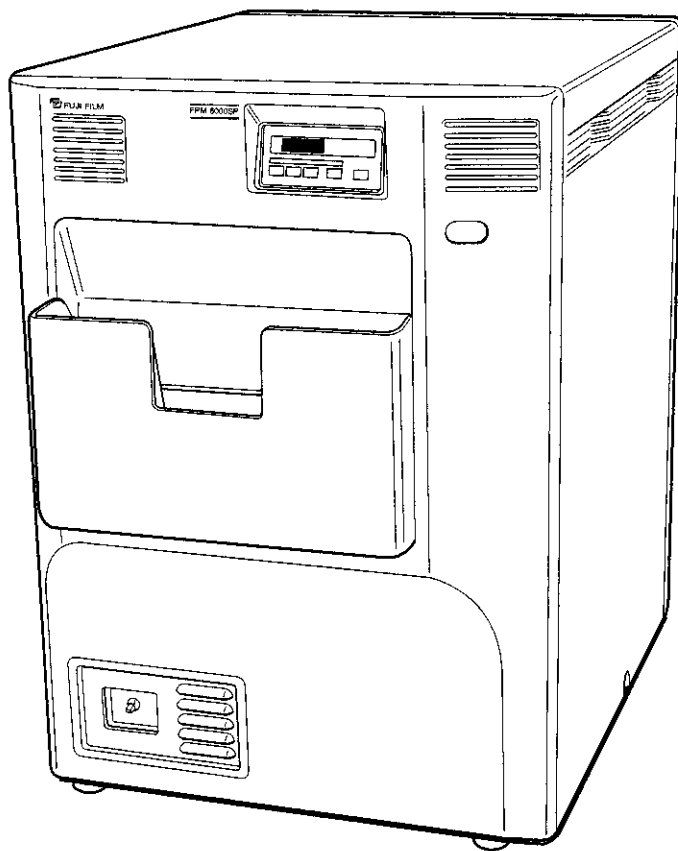




## INSTALLATION MANUAL

# FUJI INDUSTRIAL FILM PROCESSOR FPM 6000SP



**First Edition**

IX-60SEE

# INTRODUCTION

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The FPM6000SP Fuji Industrial Film processor rapidly processes X-ray film.

It requires only a minimum of installation space.

For long-term, trouble-free use of the FPM6000SP, thoroughly read this manual before preparing the processing area and/or prior to actual installation data or technical support is required, contact your Fuji overseas office or related dealer.

## **CAUTION**

- This processor must never come into contact with a patient, and should not be used, when feasible, in a patient environment.

## **WARNING**

- Make sure that electrical and mechanical work for installation is undertaken only by properly authorized personnel.

## **WARNING**

- Do not attempt to lift heavy equipment or parts on your own. Obtain assistance from able-bodied persons or use suitable equipment.

# CONTENTS

<b>1. BEFORE INSTALLATION</b>	<b>6</b>
<b>2. TOOL AND ACCESSARIES REQUIRED FOR MACHINE INSTALLATION</b>	<b>7</b>
<b>3. SPECIFICATIONS</b>	<b>8</b>
<b>4. LAYOUT</b>	<b>9</b>
4.1 Installation Method	9
4.1.1 Standard Installation	9
4.1.2 Nonstandard Installations	9
4.2 Work Space	10
4.3 Outside Dimensions	10
<b>5. INSTALLATION ROOM ENVIRONMENT</b>	<b>11</b>
5.1 Ventilation System	11
5.2 Shielding From Direct Sunlight	11
5.3 Room Temperature Adjustments	11
5.4 Floor Condition	11
<b>6. REQUIRED INSTALLATION WORK</b>	<b>12</b>
6.1 Film Processor	12
6.1.1 Uncrating and Installation Precautions	12
6.2 Operating Condition Design	14
<b>7. PARTITIONING PROCEDURES</b>	<b>15</b>
7.1 Standard Partitioning Overview	15
7.2 Partitioning Boards Type-A Installation	17
7.3 Film Discharge End Partitioning Overview-1	20
7.4 Partitioning Boards Type-B Installation	22
7.5 Film Discharge End Partitioning Overview-2	25
7.6 Partitioning Boards Type-C Installation	27
7.7 Water Supply Piping	30
7.8 Water Drainage Piping	30
7.9 Air Exhaust Ducting	31
7.10 Ventilation System Installation	32
7.11 Connection Diagrams	33
7.12 Electrical Work	35
7.12.1 Electrical Work	35
7.12.2 Power Cord Connection Diagram	36
7.13 Sink	40
<b>8. DATA REQUIRED FOR MACHINE INSTALLATION</b>	<b>41</b>
8.1 Electrical	41
8.2 Air Conditioning	41
8.3 Water Supply / Drainage	41
8.4 Weight	41

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**1. BEFORE INSTALLATION**

**2. TOOL AND ACCESSARIES REQUIRED FOR MACHINE INSTALLATION**

**3. SPECIFICATIONS**

**4. LAYOUT**

**5. INSTALLATION ROOM ENVIRONMENT**

**6. REQUIRED INSTALLATION WORK**

**7. PARTITIONING PROCEDURES**

**8. DATA REQUIRED FOR MACHINE INSTALLATION**

# 1 BEFORE INSTALLATION

- (1) When determining the FPM6000SP installation room layout, consider the room size and work flow.
  - See 4. LAYOUT. (Page 9)
- (2) Check the FPM6000SP installation site environmental conditions, and complete any necessary preinstallation procedures for adjustment of environmental conditions.
  - See 5. INSTALLATION ROOM ENVIRONMENT. (Page 11)
- (3) Review the power supply contact with your electrical contractor and complete any necessary preinstallation procedures.
  - Consult your electrical contractor.
- (4) When using tap water, ensure that all applicable local codes are met, and complete any necessary preinstallation procedures.
- (5) Determine all preliminary procedures (partitioning, plumbing, electrical supply, etc) and incidental work necessary for FPM6000SP installation, and carry out all such procedures excluding those related to actual FPM6000SP connections.
  - See 6. REQUIRED INSTALLATION WORK. (Page 12)
- (6) Environmental Conditions  
Please make sure that the environment maintains the following conditions.

Temperature:	10-30°C
Humidity:	30-80% relative humidity
Water temperature:	constant-temperature water at a temperature that is at least 15°C and 5°C lower than the developing set temperature.

## TOOL AND ACCESSARIES REQUIRED FOR MACHINE INSTALLATION

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### (1) Tools

- Philips screwdriver.
- Pliers, adjustable wrench, razor-blade knife.
- Level.
- Caulking agent, sealing tape.

### (2) Partitioning Materials

Partitioning boards Type-A, Type-B or ,Type-C (optional and ordered separately).

### (3) Water Supply Plumbing Materials

Water supply kit (Supplied by Local dealer).

- Pressure-resistant hose/water supply hose [0.8 m (31 in.) ] (standard accessory) - For connecting the water supply pipe to the FPM6000SP.

### (4) Water Drainage Plumbing Material

- Water drain hose [19 mm (3/4 in.) ID x 25 mm (1 in.) OD x 5 m (16 ft.) ] (standard accessory)  
- For FPM6000SP water/solution drain piping connection.

### (5) Air Exhaust Piping Material

- Flexible Hose, 2.5 m (8.3 ft.) (standard accessory) - For connecting the FPM6000SP exhaust port to an exhaust.

**NOTE :** *The ammeter incorporated circuit breaker must be furnished separately.*

# SPECIFICATIONS

<b>Film Transport</b> .....	Continuous roller transport system
<b>Processing Time</b> .....	469 sec (100 sec developer immersion time), and 703sec (150 sec developer immersion time) (leading edge)
<b>Film Size</b> .....	Sheet film: 8.5×15.2 cm ~ 35×43cm (14×17 in.)
<b>Processing Capacity</b> .....	(14×17 in. film) 469 sec (100 sec developer immersion time), processing cycle : 41 sheets/hour 703 sec (150 sec developer immersion time) processing cycle : 28 sheets/hour
<b>System Control</b> .....	Microprocessor controlled
<b>Control Display</b> .....	Back-light liquid crystal display
<b>Tank Capacity</b> .....	Developer : 12.7 Lit. ( 3.4 US gal. ) Fixer : 12.4 Lit. ( 3.3 US gal. ) Washer : 10.9 Lit. ( 2.9 US gal. )
<b>Solution Temperature Control</b> .....	Developer and Fixer temperature thermistor controlled Control precision :Dev.±0.3°C(0.5°F)
<b>Solution Recirculation</b> .....	Continuous solution recirculation and agitation by recirculation pumps
<b>Film Detection</b> .....	Infrared sensors at entrance
<b>Replenishment System</b> .....	Automatic replenishment based on the area of film processed
<b>Wash Water Requirement</b> .....	Temperature : constant-temperature water at a temperature that is at least 15°C and 5°C lower than the developing set temperature Flow rate : 3 Lit. (0.8 US gal.) / min. during processing
<b>Dimensions (W×D×H)</b> .....	780×793 (1121*)×1076 mm 30-11/16×31-1/4(44-1/8*)×42-3/8 in * including feed tray and film receiver
<b>Electrical Requirements</b> .....	208/240 VAC 60 Hz Single phase (UL) 220/230/240 VAC 50 Hz Single phase (TÜV GS) 380/400/415 VAC 50 Hz 3 phase Y+N (TÜV GS)
<b>Weight</b> .....	221 kg (487 lb.) without solutions 257 kg (567 lb.) with solutions
<b>Standard Accessories</b> .....	Manual handle, toolbox, splash guards, flexible hose.
<b>Optional Accessories</b> .....	Partition panels, Automatic drain valve, MOL-7 connection kit.
<b>Safety Specifications</b> .....	Comply with UL and TÜV GS safety regulation; CE Mark. The non-return water connection complies with the DIN standard for connection to drinking water systems of the DVGW
<b>Acoustic Noise</b> .....	Specifications 58 dB (A) or lower during operation and stand-by
<b>Schallemission</b> .....	Bereitschaft Mode : Kleiner als 58 dB (A) Handlung Mode : Kleiner als 58 dB (A) nach DIN 45 635 Teil 19

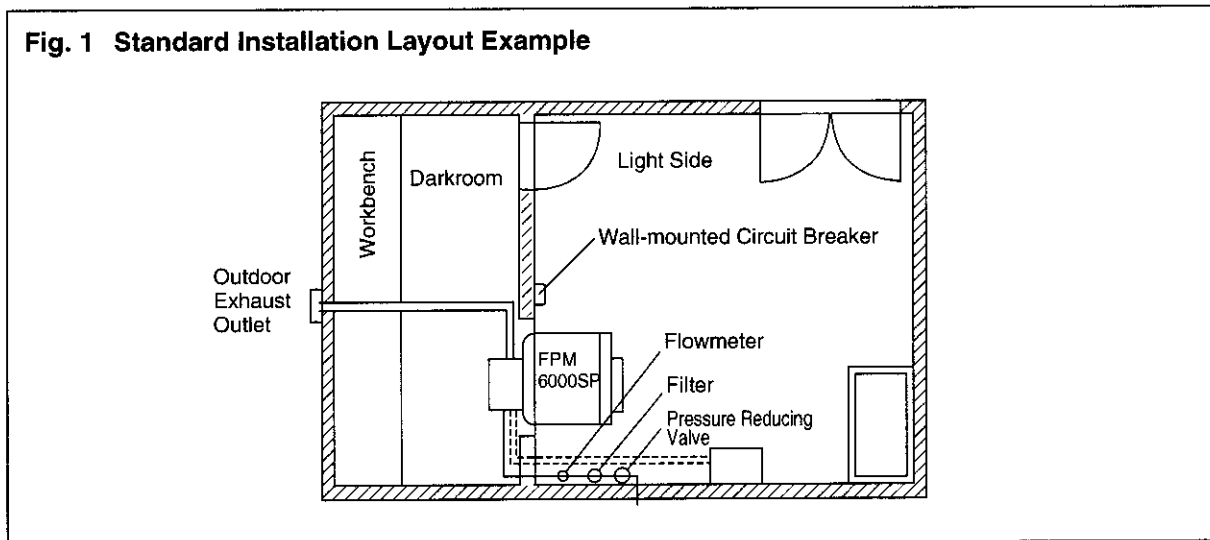
**NOTE :** *Specifications are subject to change without notice.*

## 4.1 INSTALLATION METHOD

### 4.1.1 Standard Installation

The greater part of the FPM6000SP main body is positioned on light side.

**Fig. 1 Standard Installation Layout Example**



### 4.1.2 Nonstandard Installations

#### (1) Darkroom Installation

The entire FPM6000SP body is positioned in the darkroom. This method is favorable for situations where a large darkroom is available and light side installation space does not exist.

#### (2) Light Room Installation (EC Daylight System Equipment Installation Required)

The entire FPM6000SP body is positioned within a light room.

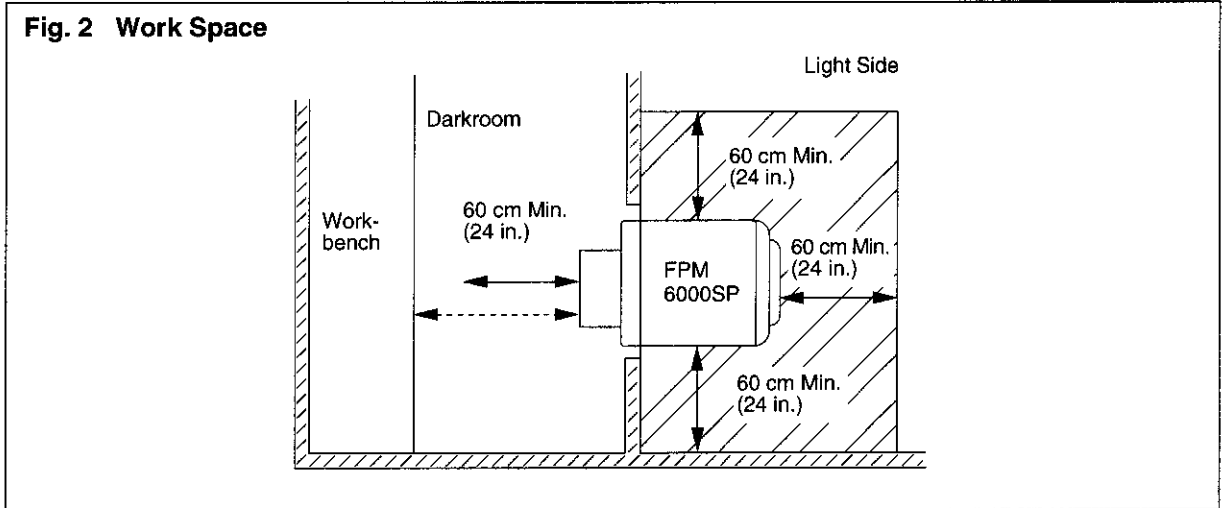
This method is suitable for situations where daylight film handling system is connected with the processor.



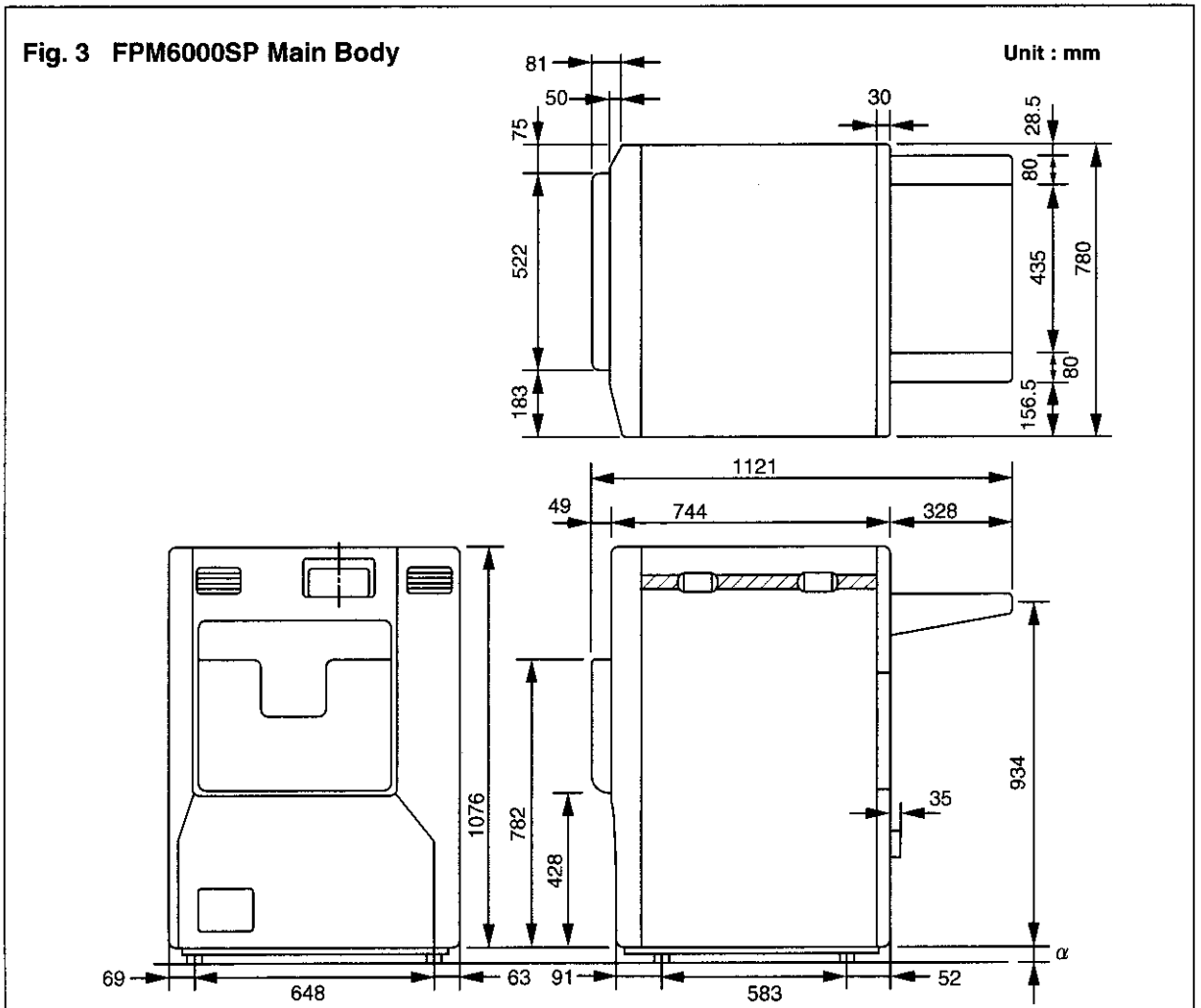
## 4. LAYOUT

### 4.2 WORK SPACE

Provide a minimum clearance of 60 cm (24 in.) around the FPM6000SP for operation, maintenance, and service access.



### 4.3 OUTSIDE DIMENSIONS



## 5.1 VENTILATION SYSTEM

The FPM6000SP installation room must be equipped with a ventilator.

When installing the unit in a darkroom, be sure to furnish at least one ventilation inlet and outlet.

- The room air is used for film drying purposes. Therefore, if the room temperature and humidity are too high, inadequate drying may result.
- To provide protection against humidity, the FPM6000SP employs quality stainless steel and synthetic resins. However, if the room poorly ventilated or wet, machine life reduction or machine breakdown may result.

Refer section 7.9~7.10 for more information.

## 5.2 SHIELDING FROM DIRECT SUNLIGHT

In the FPM6000SP is exposed to direct sunlight, unexpected problems may result. Keep the equipment out of direct sunlight or provide thick curtains to shut out sunlight.

## 5.3 ROOM TEMPERATURE ADJUSTMENTS

In cold climates, the processing solutions or water in the FPM6000SP and its piping may freeze due to extremely low room temperatures.

Further, if the processing tank solution temperature drop excessively, it takes a considerable amount of time at the beginning of each day's operations to heat the processing tank solutions to operating temperatures. To avoid such problems, normal room temperature should be maintained.

## 5.4 FLOOR CONDITION

(1) Be sure that the foundation will withstand the total FPM6000SP operating weight.

Required floor area : 0.62 m<sup>2</sup> (780 x 793 mm) or 6.7 ft<sup>2</sup> (30.7 x 31.2 in.)

Weight : 221 kg (487 lb.) without solutions

257 kg (567 lb.) with solutions

Transit Weight : 175 kg (387 lb.) without racks and solutions

(2) Be sure that the floor is anti-chemical and easy to clean.

Processing solutions and water can spill on the floor when the film processor is maintained or serviced. Therefore furnish the floor acid and alkali resistance (PH : 4 to 11) and ensure cleaning ease.

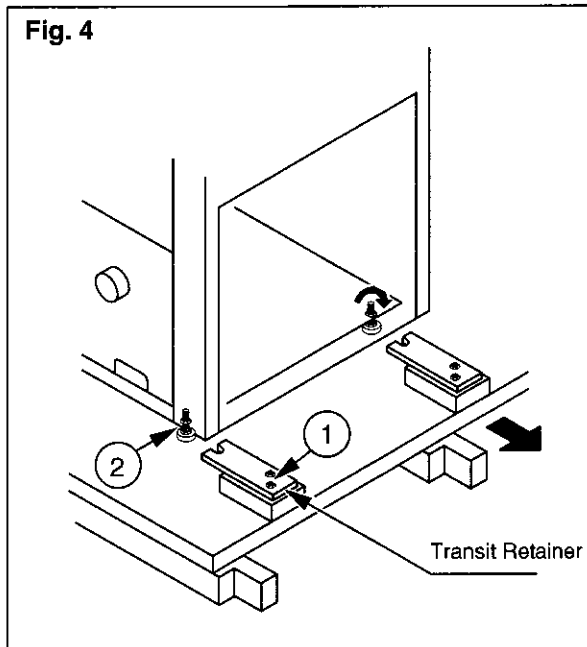
(3) Furnish a proper floor drain. To facilitate cleaning of the processing area.

## 6.1 FILM PROCESSOR

### 6.1.1 Uncrating and Installation Precautions

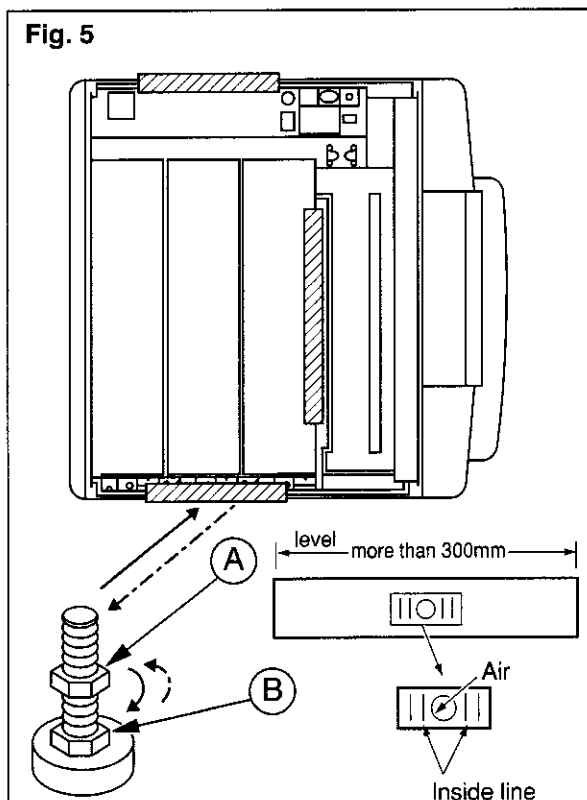
#### (1) Uncrating precautions

Remove the external wooden frame and then remove the film processor main body from the crate base as indicated below.



- (1)
  - (a) Remove transit retainer mounting.  
Screws from 8 positions. ①
  - (b) Loosen the main body height adjustment bolts and then take out the transit retainers. ②
  - (c) Remove the main body from the crate base.

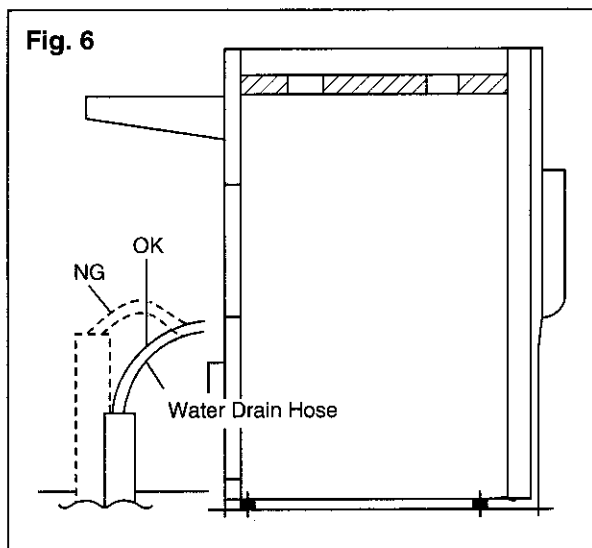
#### (2) Leveling



- (2)
  - (a) Place and check levels on the frame without racks and side covers.
  - (b) Set the racks, place levels in shaded positions as shown.
  - (c) Use the level over 300mm lengths level the main body precisely so that air should be placed within inside line of the levels for both directions, front-back and right-left.
  - (d) If the drive side is higher than the other, it would cause uneven density on the film processed.  
It is important to level precisely.
  - (e) There are 4 nuts at the bottom of the main body and the height of the body can be adjusted accordingly.  
As shown in the figure, adjust the required height by rotating the nut (A) clockwise or counter clockwise and then rotate the nut (B) clockwise to lock the position.

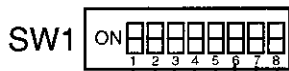
## (3) Water drain piping

Make the external water drain hose connection, exercising care so that no water drainage resistance is given. (If the drain hose is placed in a position marked NG in the figure, a water overflow may occur within the film processor.)



**6.2 OPERATING CONDITION DESIGN**

Operating condition setup can be performed with DIP switch SW1 on the NMC circuit board.  
 DIP switches SW1-1 to SW1-8 must always be setup for proper film processor use.

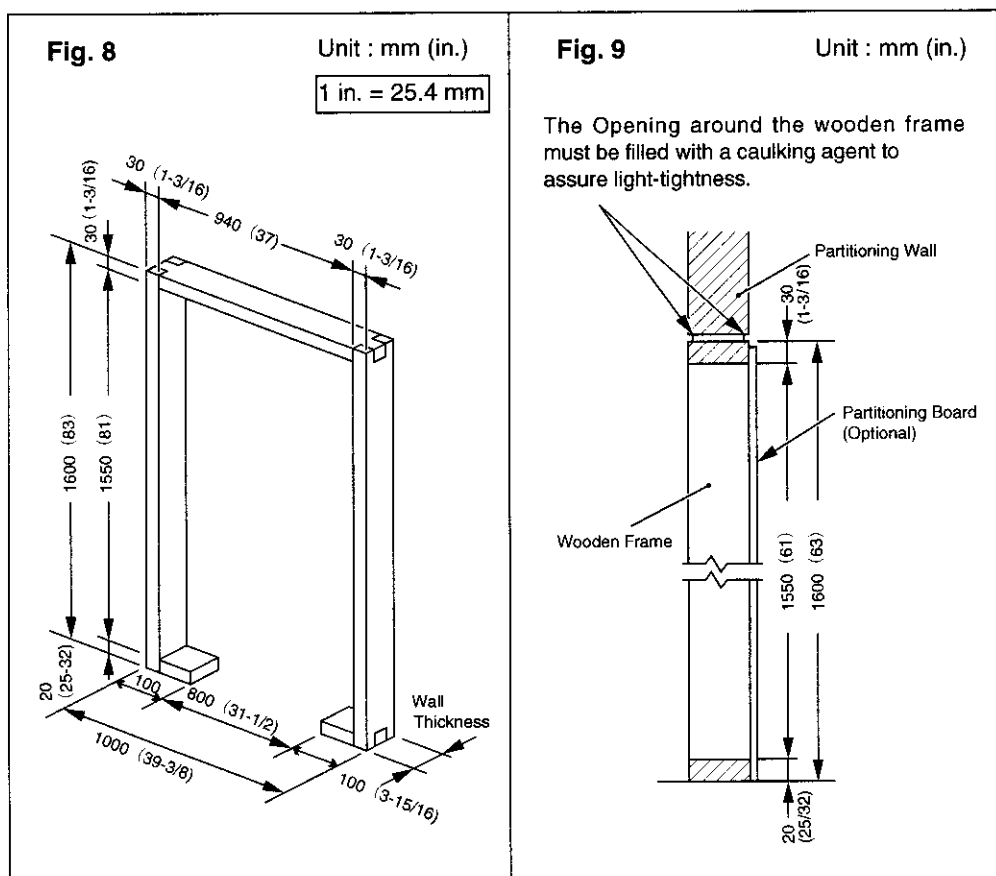
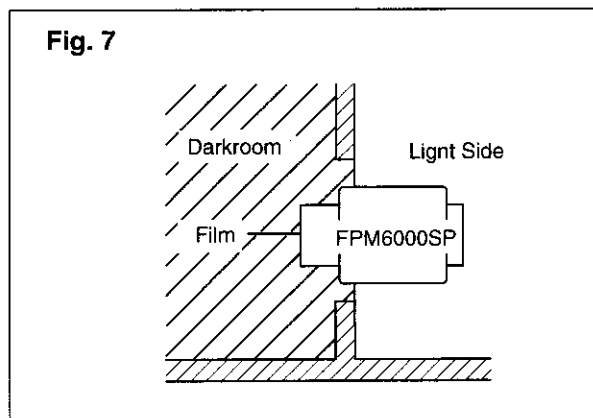


- SW1-8 RAM Clear Setup (The ON position should normally be selected)  
 (ON) Deactivates the RAM clear feature.  
 (OFF) Activates the RAM clear feature.  
**NOTE** :The ON position should normally be selected.  
 When you turn ON the circuit breaker with the OFF position selected, various stored correction values and setup values are cleared.  
 If the stored values are inadvertently cleared, turns this switch to the ON position, and reenter the correction values recorded on the back surface of the dryer section cover.
- SW1-7 (OFF) For normal use. (The OFF position should be selected)
- SW1-6 (ON) Water is supplied according to the drive motor intermittent or ON timing during film processing.  
 (OFF) Water is supplied according to the normal SV intermittent movement or the SVON timing during film processing.
- SW1-5 (ON) Industrial mode (The ON position should be selected)  
 (OFF) Medical mode (The OFF position should be selected)
- SW1-4 Water Drainage Setup during Cooldown Cycle (The ON position should normally be selected)  
 (ON) Drain → Supply → Drain.  
 (OFF) Drain (Once only).
- SW1-3 Dryer Temperature Setup (The OFF position should normally be selected)  
 (ON) Disable the dryer temperature adjustment parameter settings according to processed film quantity.  
 (OFF) For normal use.
- SW1-2 Replenishment and Calendar Display Setup  
 Replenishment Rate Setup  
 (ON) Standard Rate : Every 5 Sheets of 10 x 12 in.  
 (OFF) Standard Rate : Every 1 Sheet of 14 x 17 in.  
 Calendar Setup  
 (ON) DD / MM / YYYY  
 ( DD : Day, MM : Month, YYYY : Year )  
 (OFF) MM / DD / YYYY  
**NOTE** :The default setting of 50Hz in the ON position and 60Hz in the OFF position.
- SW1-1 (ON) For normal use (The ON position should be selected)

# PARTITIONING PROCEDURES

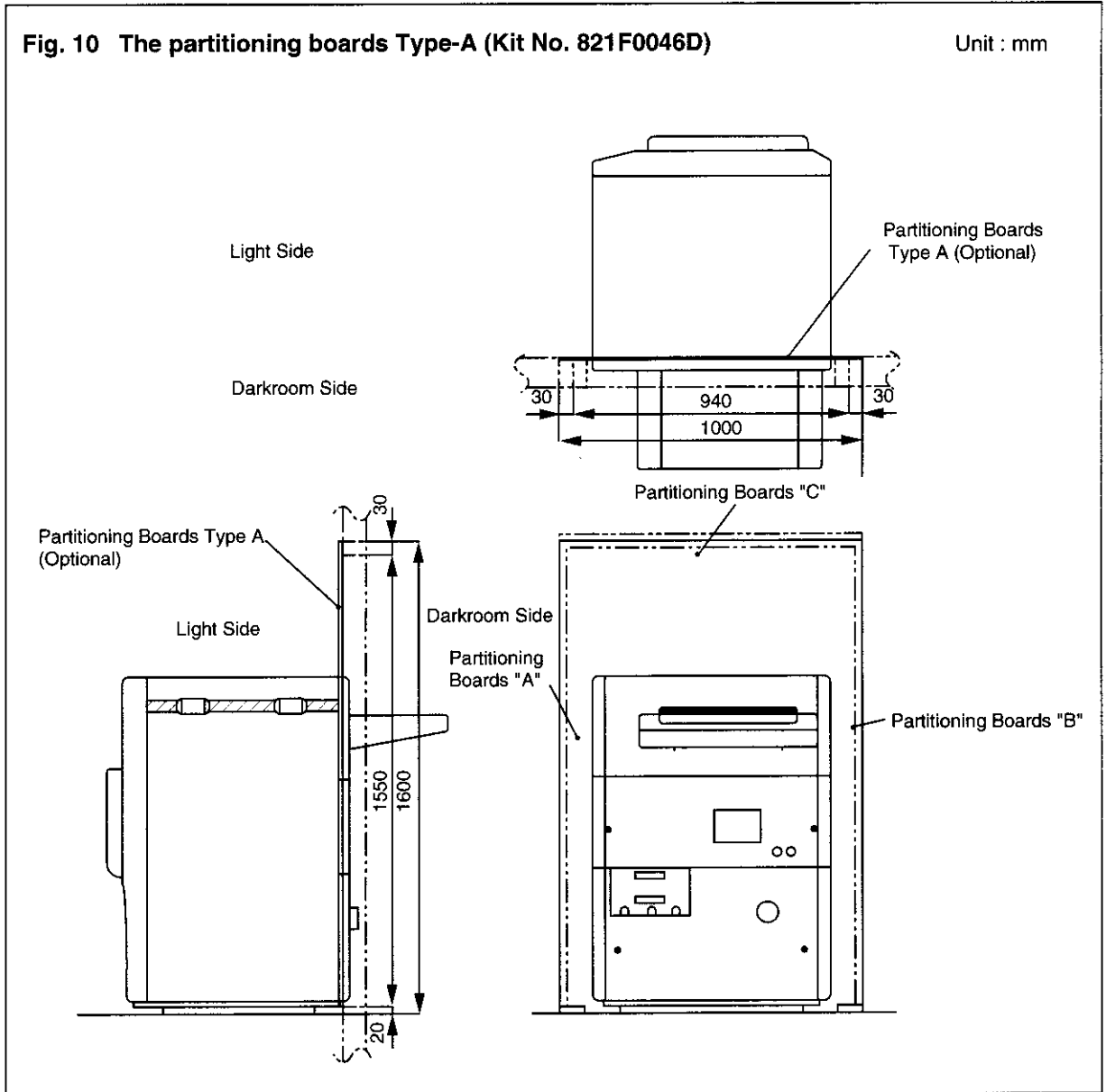
**NOTE :** The partition boards are prepared as optional. (Type-A : P-BOARD A 9000/6000, Type-B : P-BOARD B 9000/6000, Type-C : P-BOARD C 9000/6000 )

## 7.1 STANDARD PARTITIONING OVERVIEW



## 7. PARTITIONING PROCEDURES

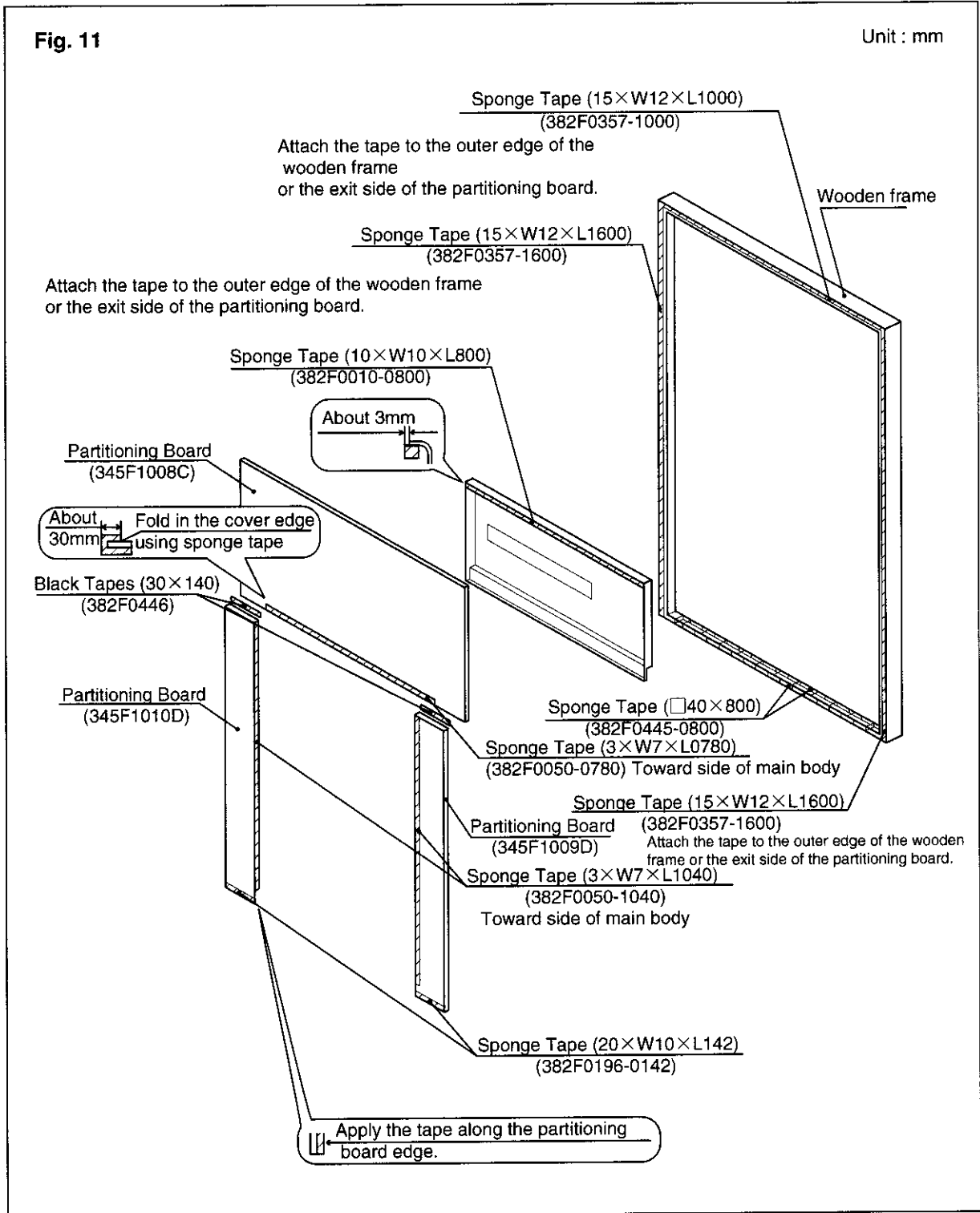
- (1) Apply the sponge tapes to partitioning boards "A", "B", and "C".
- (2) Attach partitioning boards "A" and "B" to the film processor main body.
- (3) Attach partitioning board "C" to the film processor main body and then fasten it to partitioning boards "A" and "B".



**7.2 PARTITIONING BOARDS TYPE-A INSTALLATION**

(1) When installing the partitioning boards Type-A (P-BOARD A 9000/6000) at the feed end.

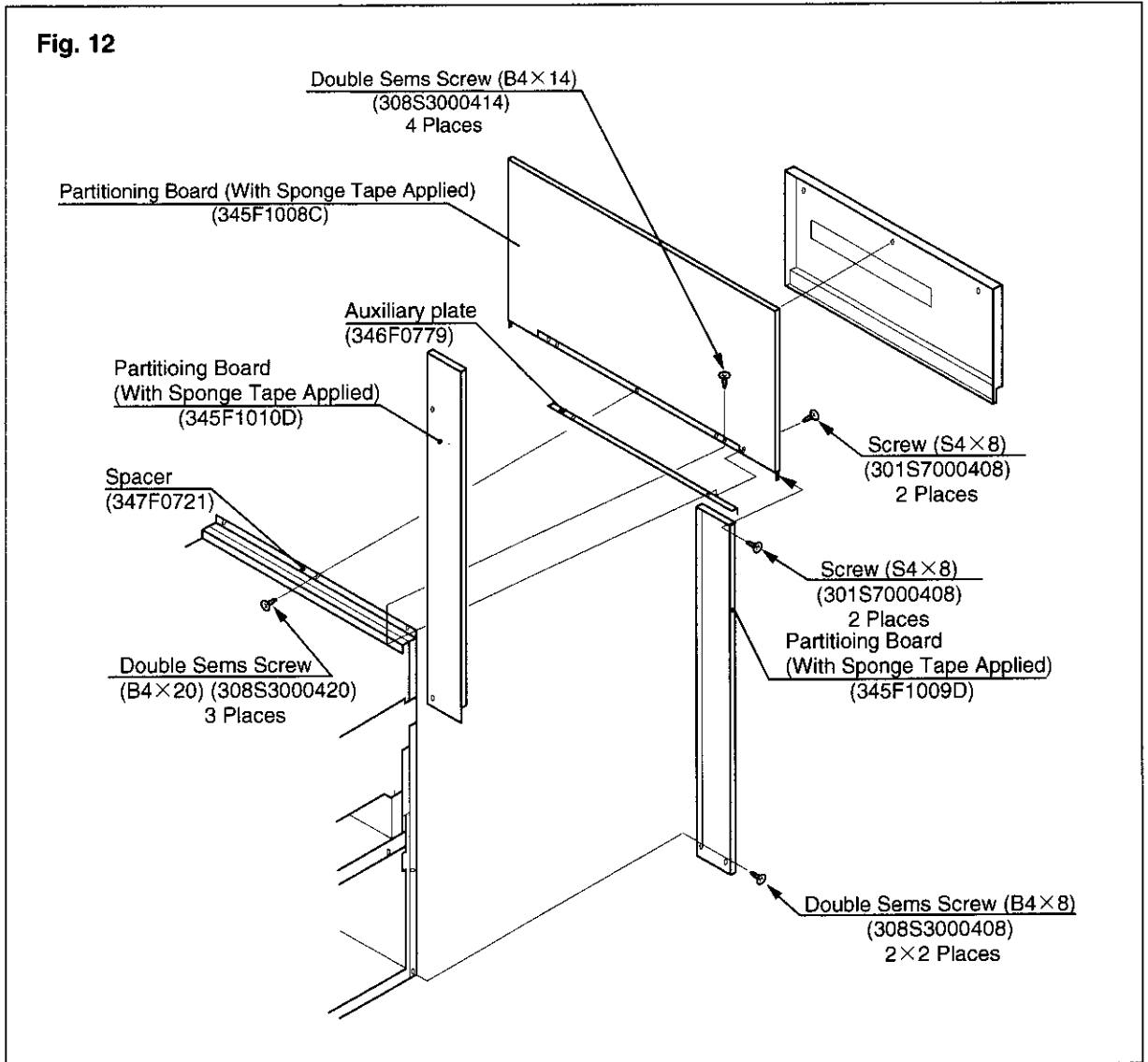
(a) Attaching the sponge tapes





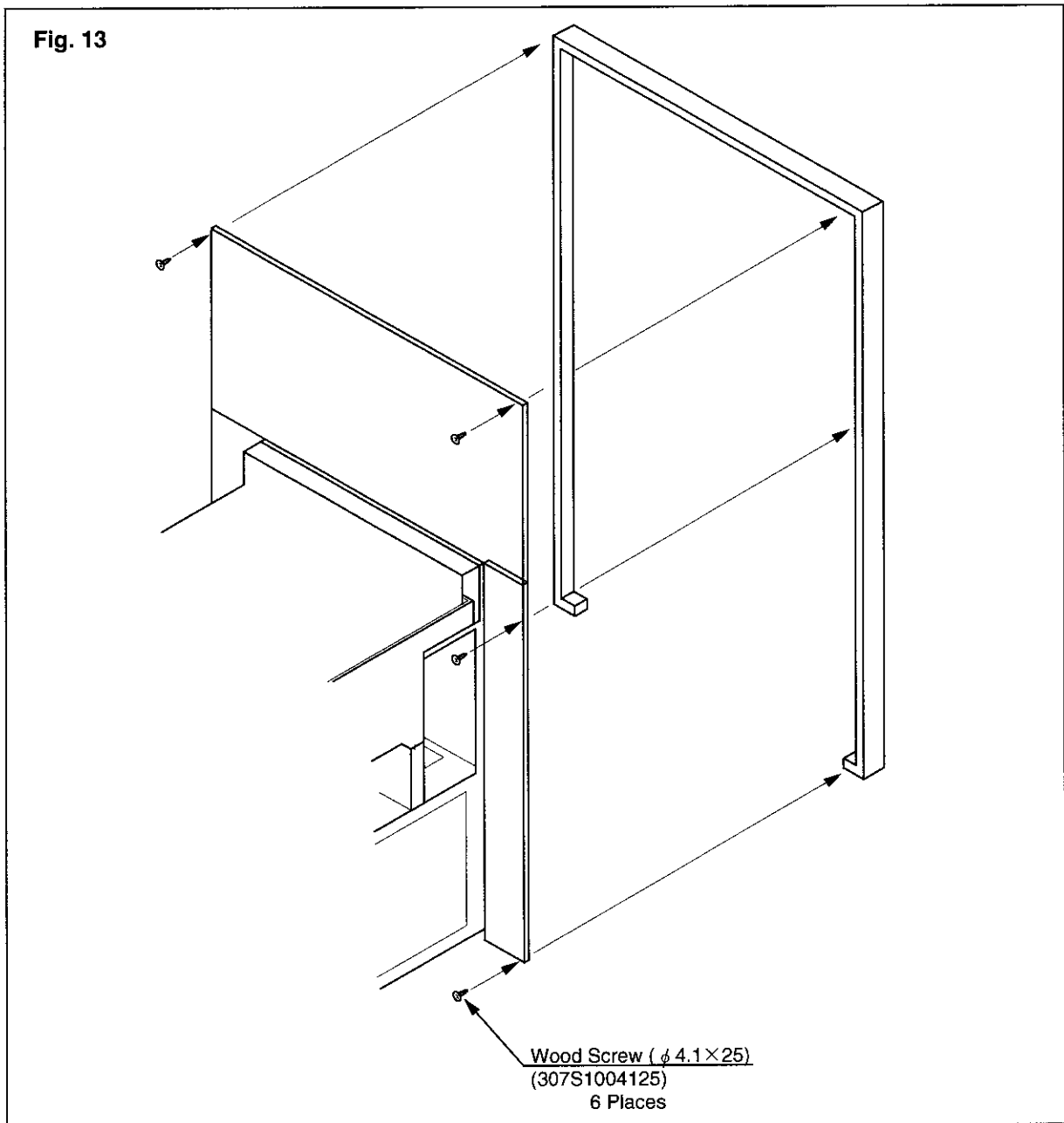
## 7. PARTITIONING PROCEDURES

(b) Attaching the partitioning boards to the film processor main body



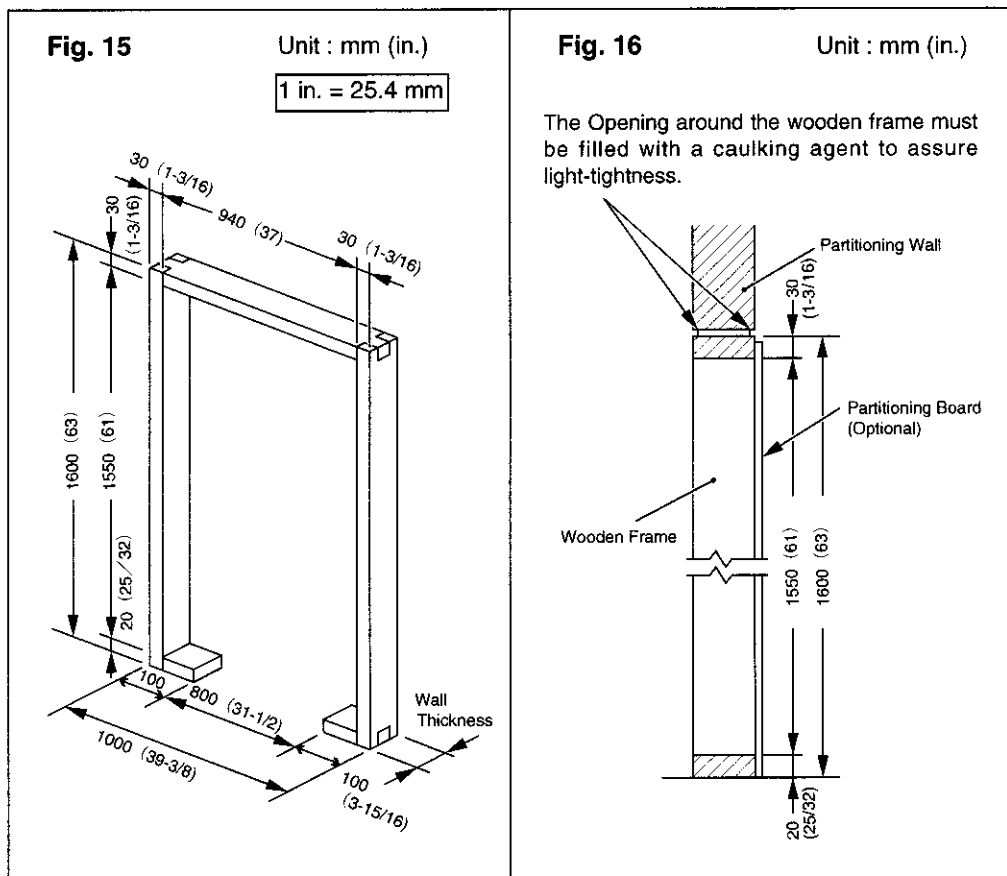
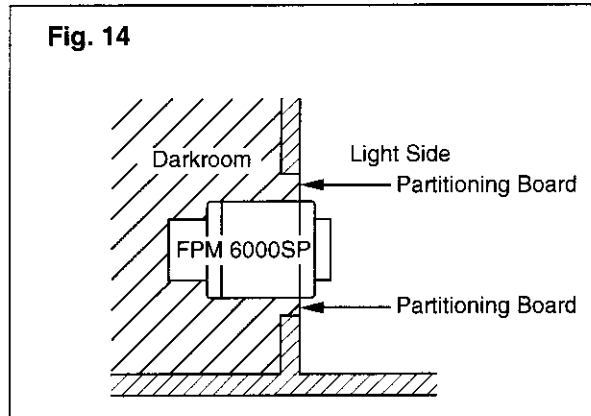
## (c) Securing the partitioning boards to the wooden frame

After completion of leveling, secure the partitioning boards to the wooden frame.



## 7. PARTITIONING PROCEDURES

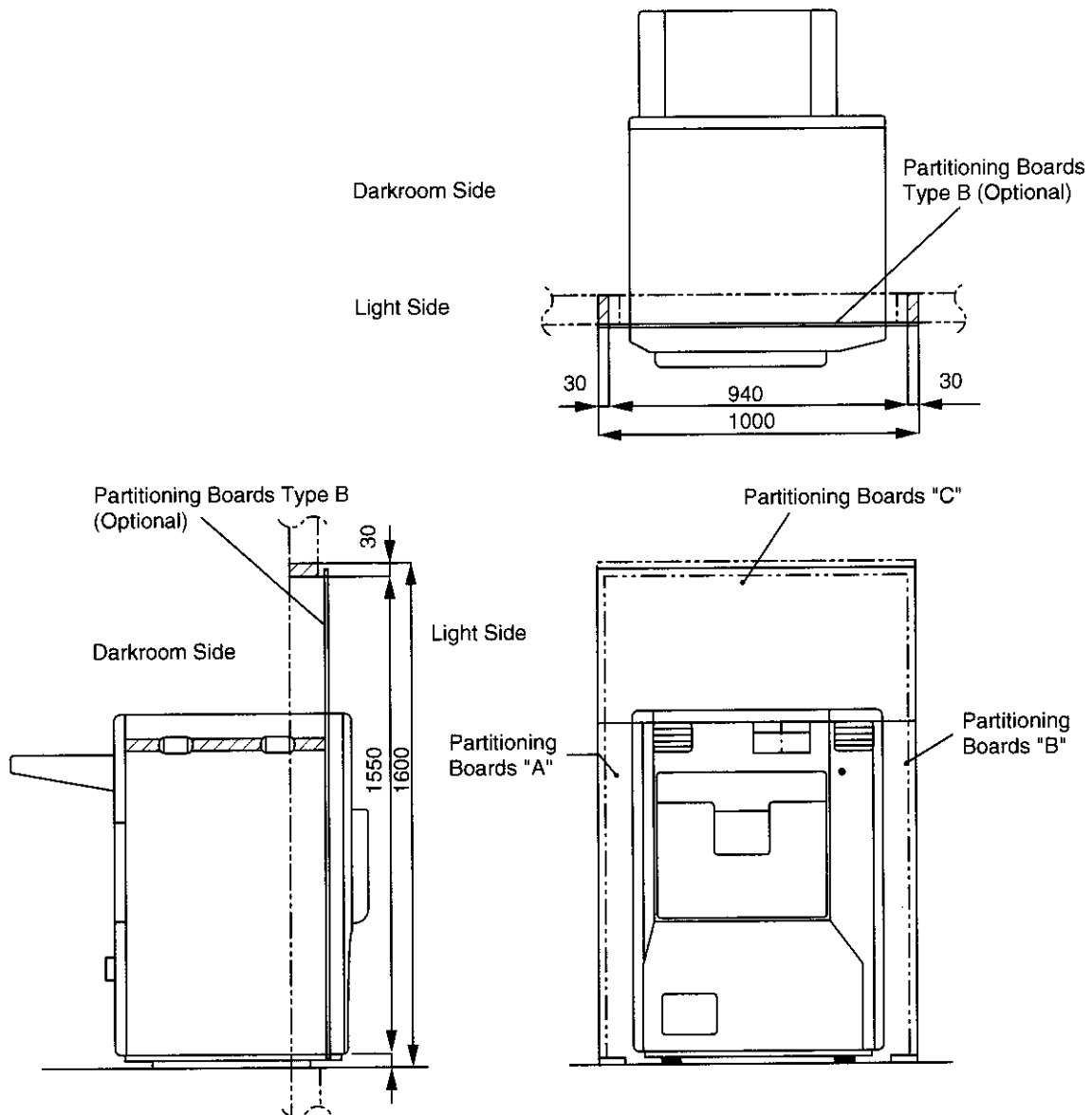
### 7.3 FILM DISCHARGE END PARTITIONING OVERVIEW - 1



- (1) Apply the sponge tapes to partitioning boards "A", "B" and "C".
- (2) Attach partitioning boards "A" and "B" to light side of the film processor main body.
- (3) Attach partitioning boards "C" to light side of the film processor main body and then fasten it to partitioning boards "A" and "B".

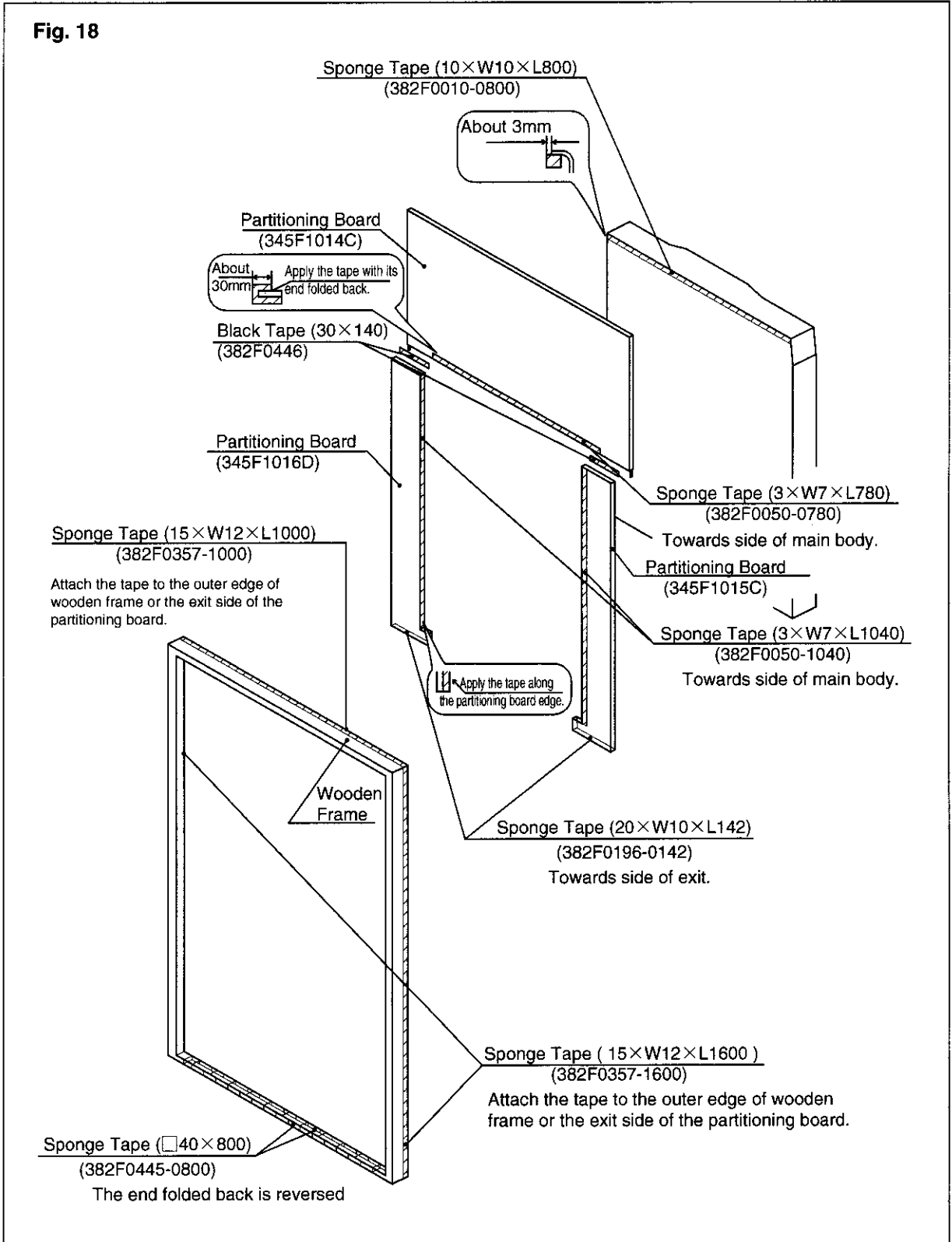
**Fig. 17 The partitioning boards Type-B (Kit No. 821F0047D)**

Unit : mm

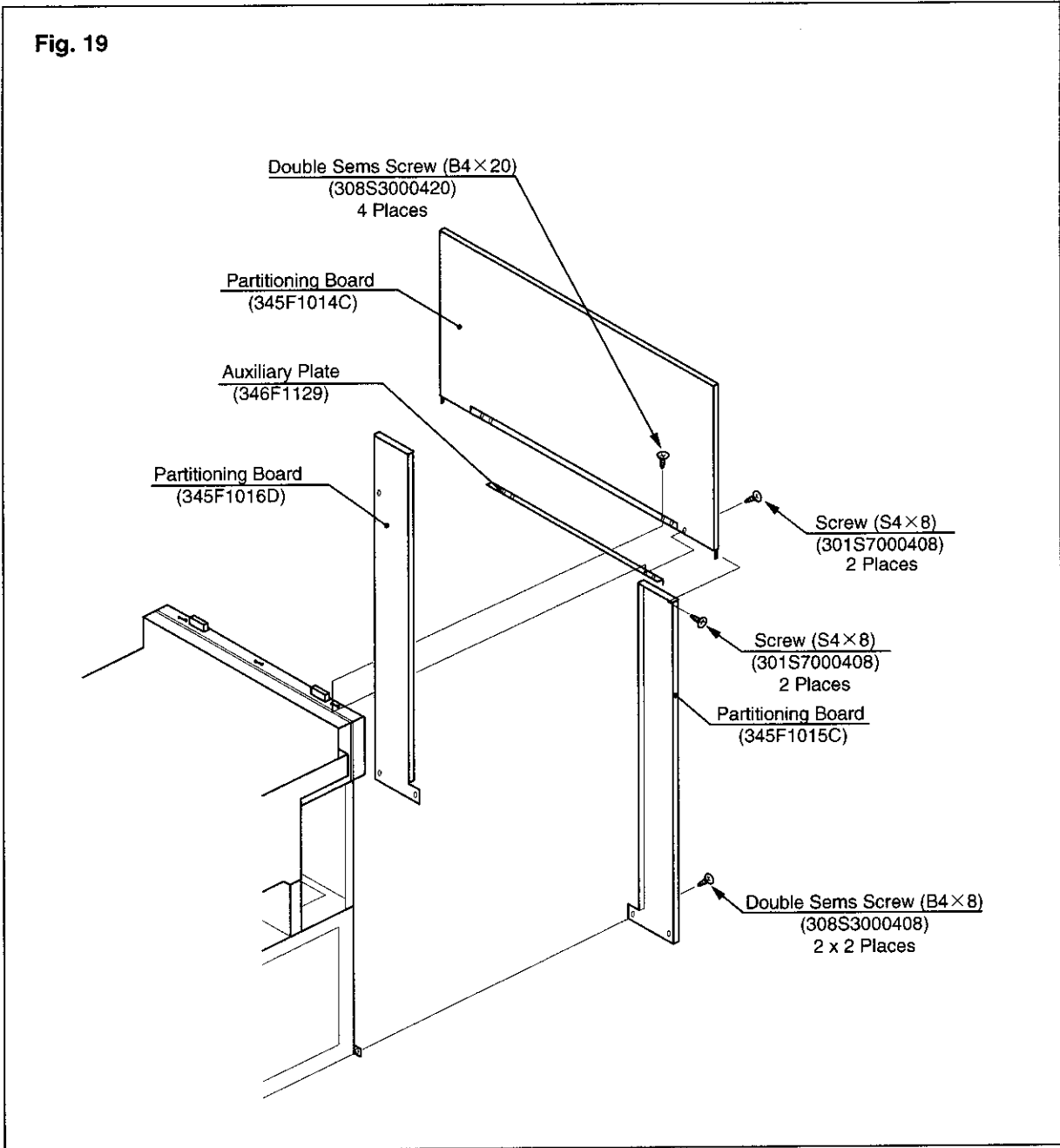


7.4 PARTITIONING BOARDS TYPE-B INSTALLATION

- (1) When installing the partitioning boards Type-B (P-BOARD B 9000/6000) at the film discharge end.
  - (a) Attaching the sponge tapes.

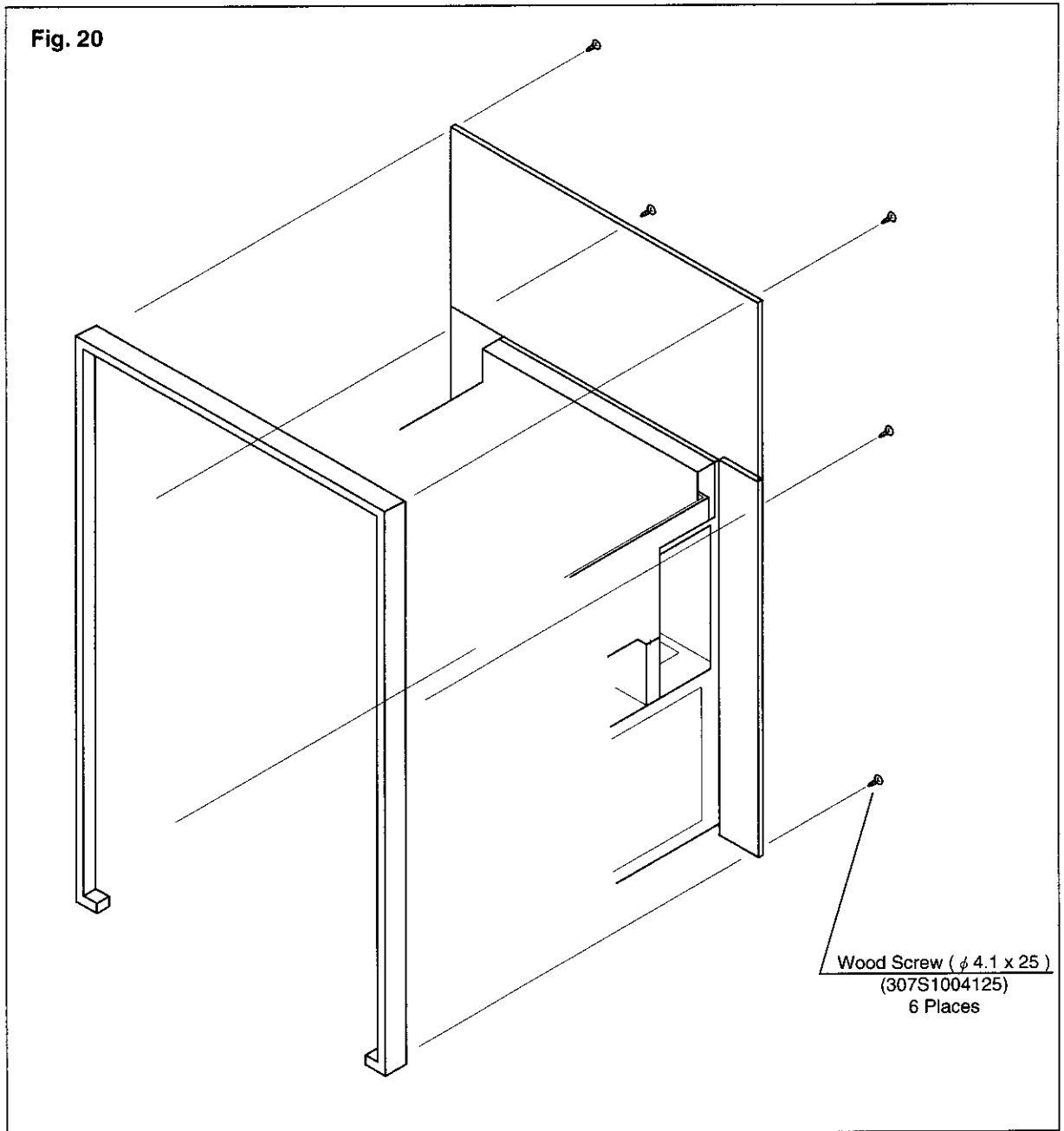


(b) Attaching the partitioning boards to the film processor main body.

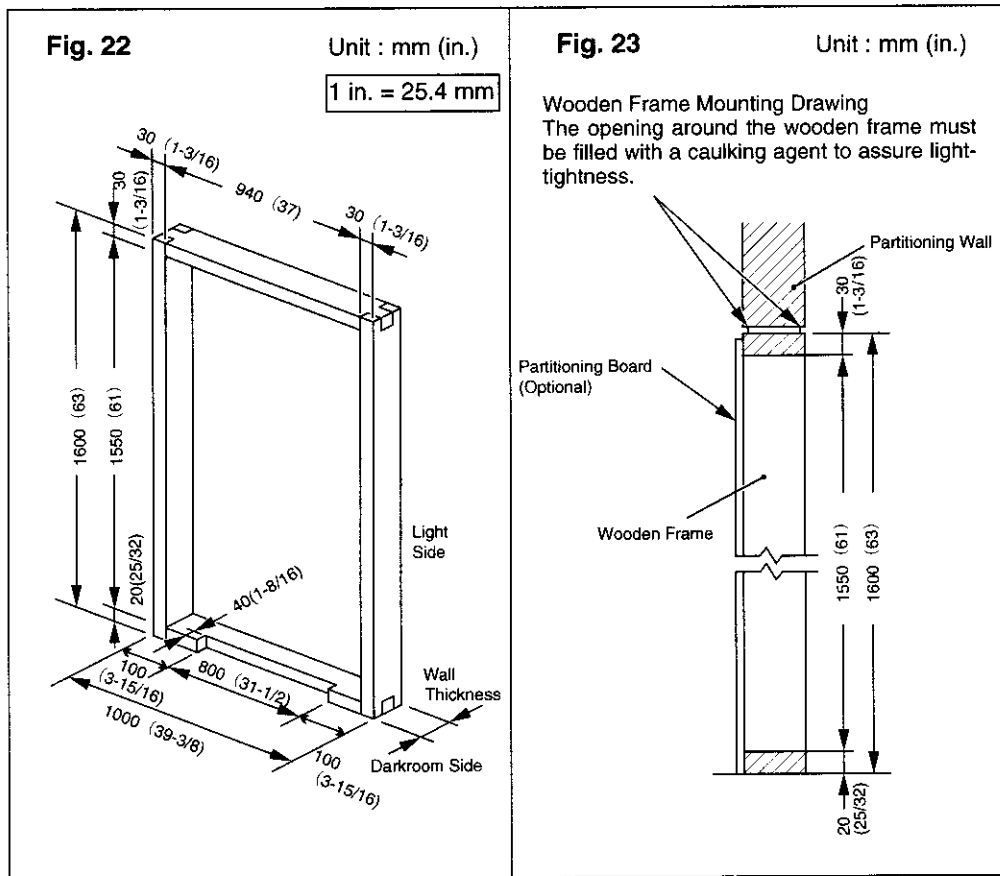
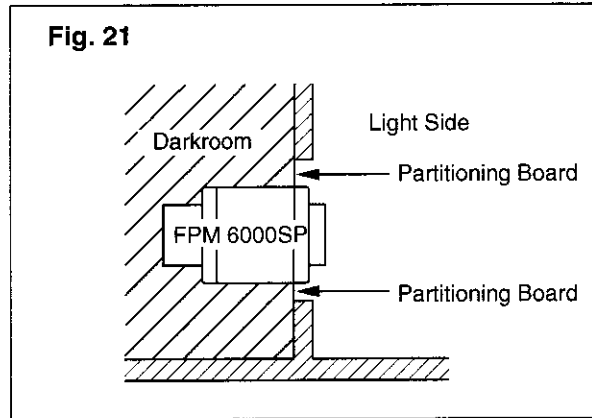


## 7. PARTITIONING PROCEDURES

(c) Securing the partitioning boards to the wooden frame.



7.5 FILM DISCHARGE END PARTITIONING OVERVIEW-2

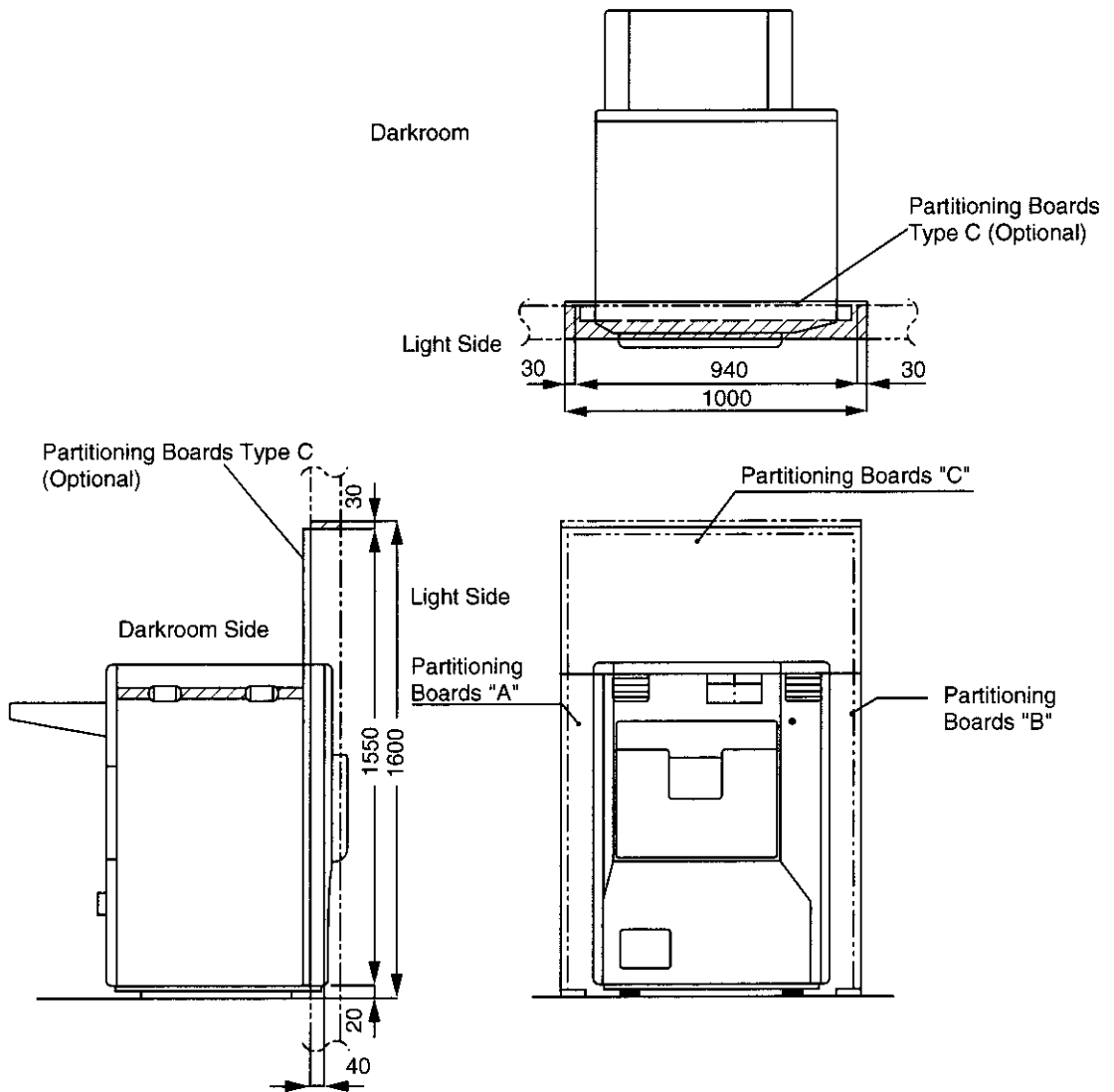




## 7. PARTITIONING PROCEDURES

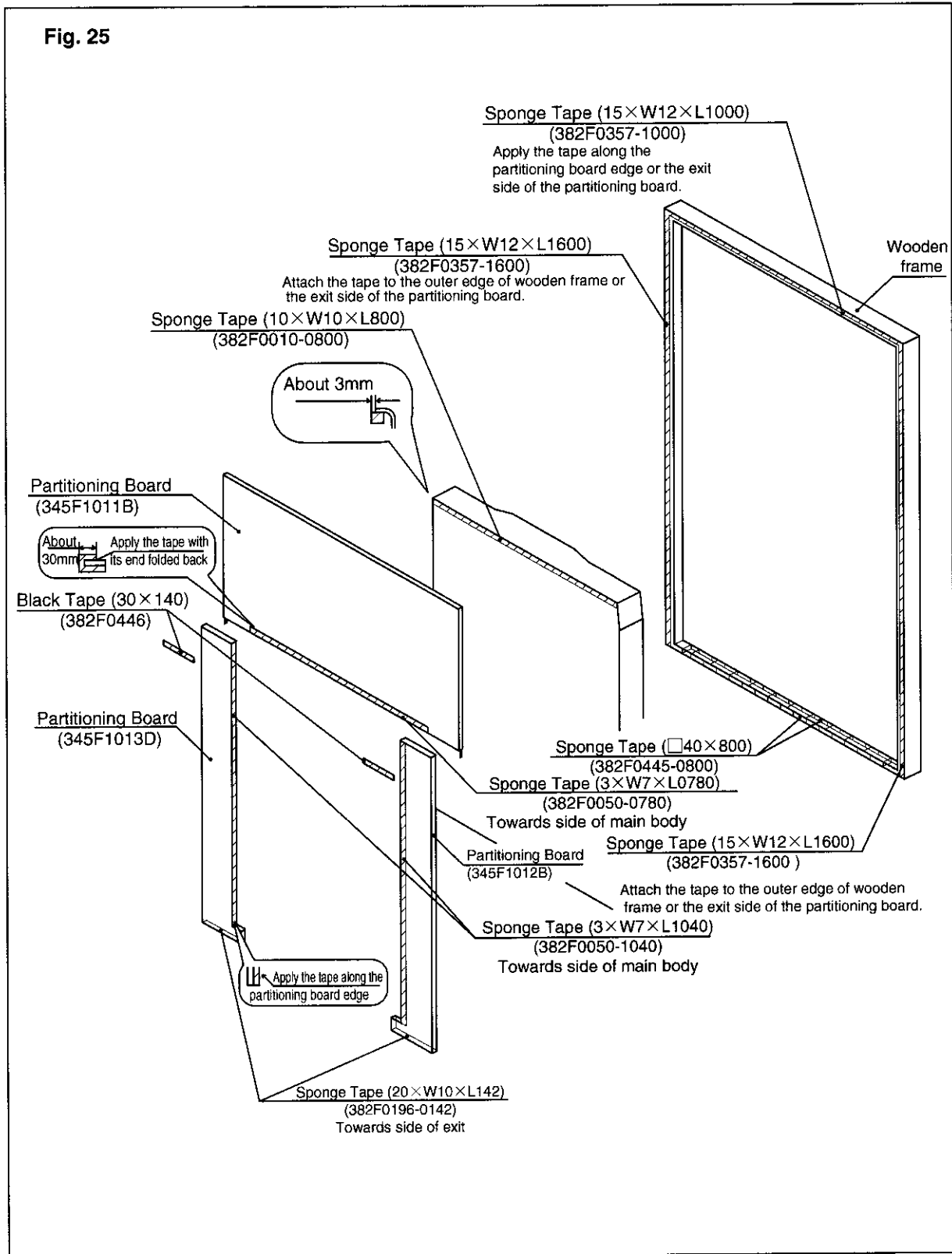
- (1) Apply the sponge tapes to partitioning boards "A", "B" and "C".
- (2) Attach partitioning boards "A" and "B" to light side of the film processor main body.
- (3) Attach partitioning board "C" to light side of the film processor main body and then fasten it to partitioning boards "A" and "B".

**Fig. 24 Partitioning boards Type-C (Kit No. 821F0048D).**



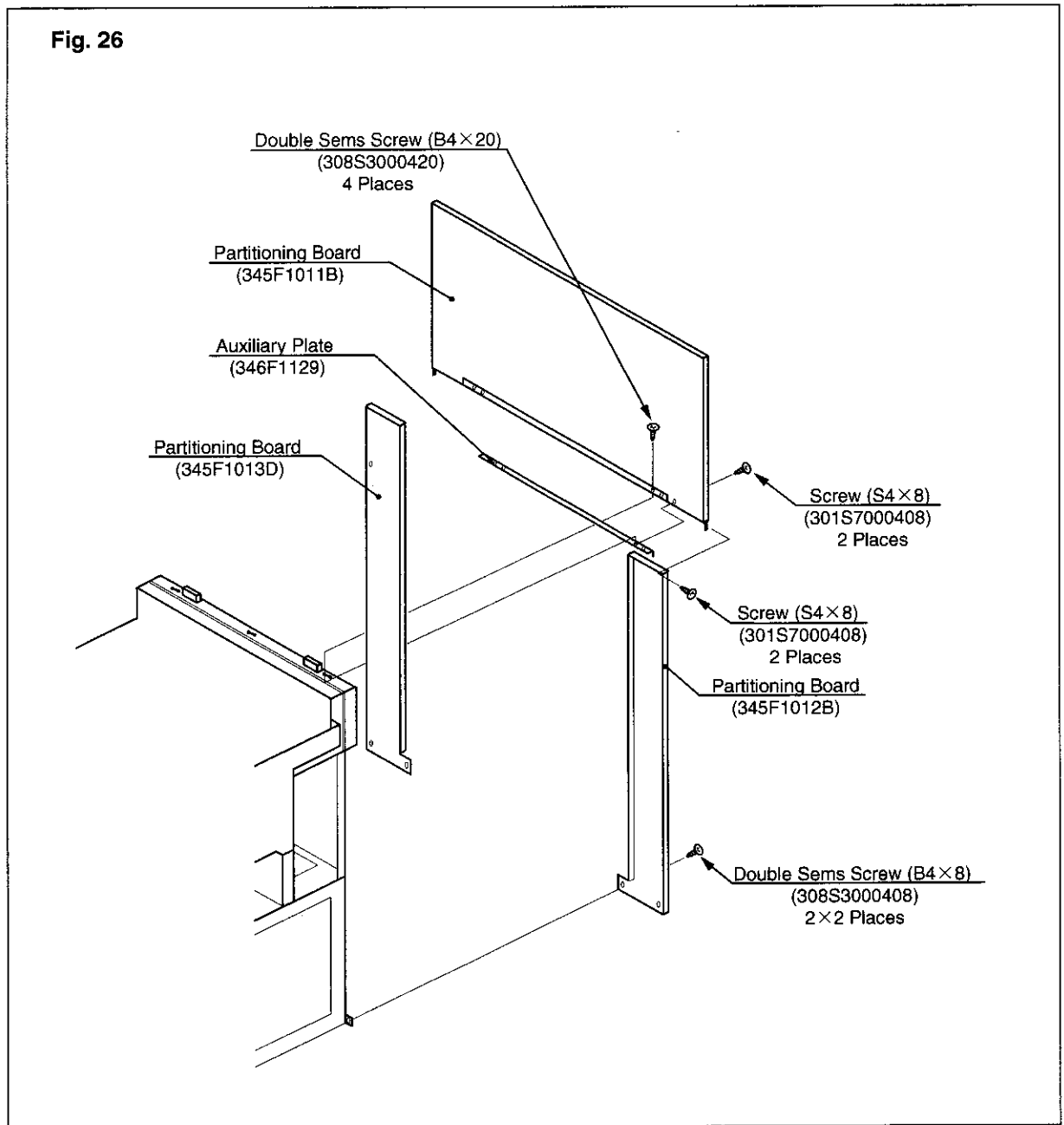
**7.6 PARTITIONING BOARDS TYPE-C INSTALLATION**

- (1) When installing the partitioning boards Type-C (P-BOARD C 9000/6000) at the film discharge end.
  - (a) Attaching the sponge tapes

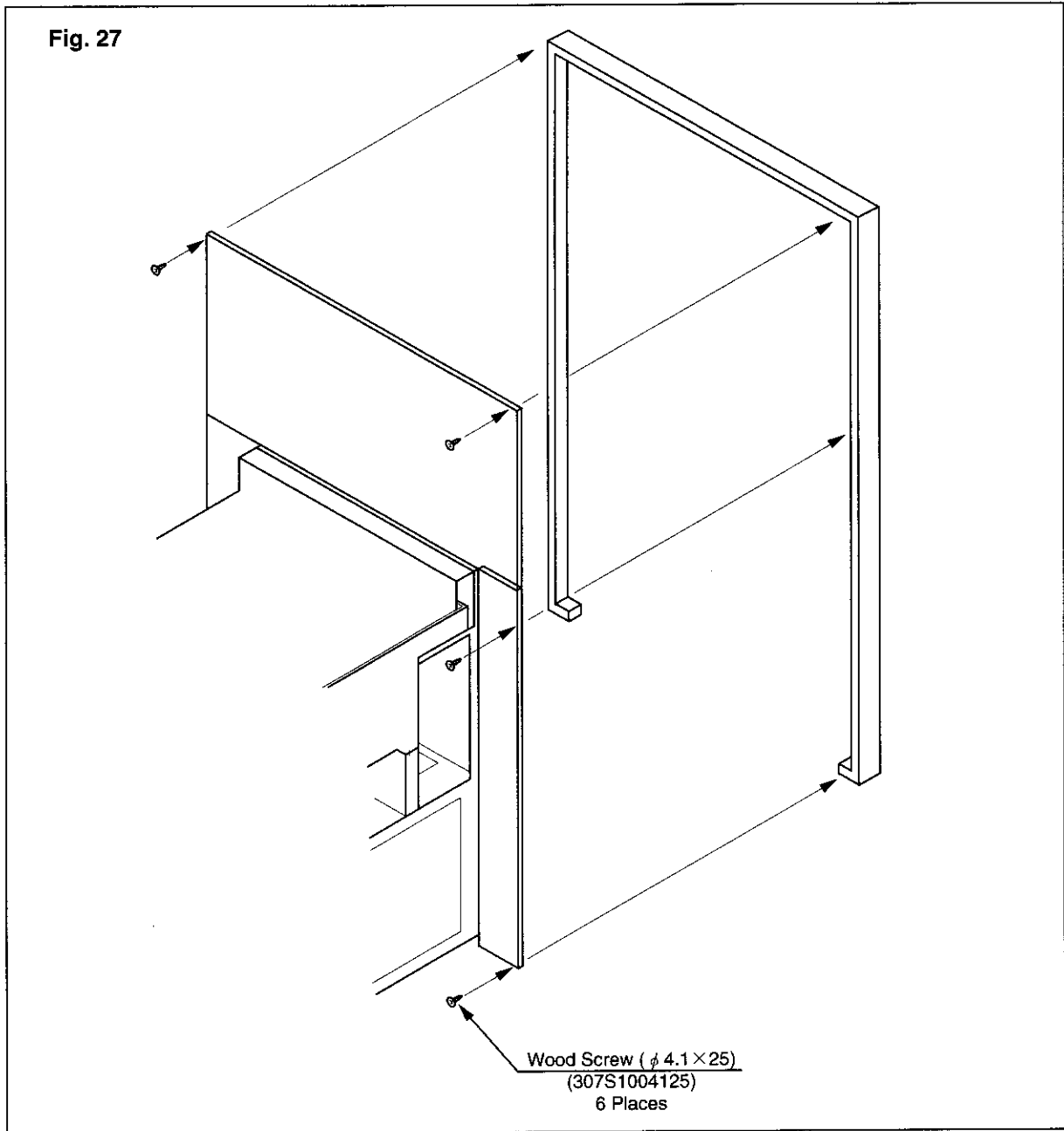


## 7. PARTITIONING PROCEDURES

(b) Attaching the partitioning boards to the film processor main body.



(c) Securing the partitioning boards to the wooden frame.



## 7. PARTITIONING PROCEDURES

### 7.7 WATER SUPPLY PIPING

**NOTE :** Follow Local codes when plumbing.

#### (1) Water Supply Plumbing Condition

<b>Water supply rate</b>	wash water : 3 Lit/min (0.8 gal/min)
<b>Supplied water temperature</b>	Water temperature : constant-temperature water at a temperature that is at least 15°C and 5°C lower than the developing set temperature

#### (2) Water Supply connections

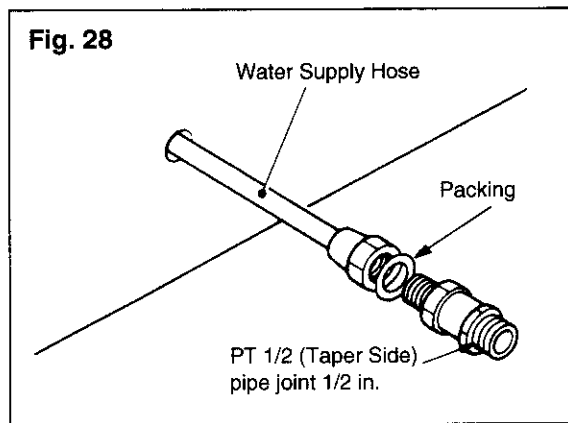
(a) The water supply plumbing must be provided with a dirt-eliminating filter and a flowmeter.

**NOTE :** Order these items (flowmeter, filter, and plumbing parts) through your local dealer.

(b) The line between the stop valve and flowmeter should be positioned at the eye level and located within easy reach for service.

(c) Make the 2 following water supply connections.

- Attach the 1/2" threaded pipe joint to the end of the pipe.
- As the connection between the pipe joint and the FPM6000SP is to be made with water supply hose which is connected to the main body, position the socket within the reach of the FPM6000SP water supply hose.



**NOTE :** For end of the pipe and pipe joint connections be sure to use commercially available sealing tape.

### 7.8 WATER DRAINAGE PIPING

**NOTE :** Follow the local code when installing the DRAIN.

#### (1) Water Drainage Conditions

<b>Water drainage rate</b>	Operating : 5 Lit/min (1.3 gal/min) maximum Processing tank solution draining : 2.5~7.5 l/min (0.7~2.8 gal/min)
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#### (2) Water Drainage Plumbing Connection

(a) Install a 1-1/2 or 2 in. Diameter hard PVC drain pipe under the feed tray in such a manner that its upper end is positioned 200 to 250 mm (8 to 10 in.) above the floor level.

(b) Cut the accessory hose in convenient lengths, and make the connection between the FPM6000SP main body and drain pipe.

### CAUTION

Do not use brass or copper for the Drain pipe.

**7.9 AIR EXHAUST DUCTING**

**⚠ CAUTION**

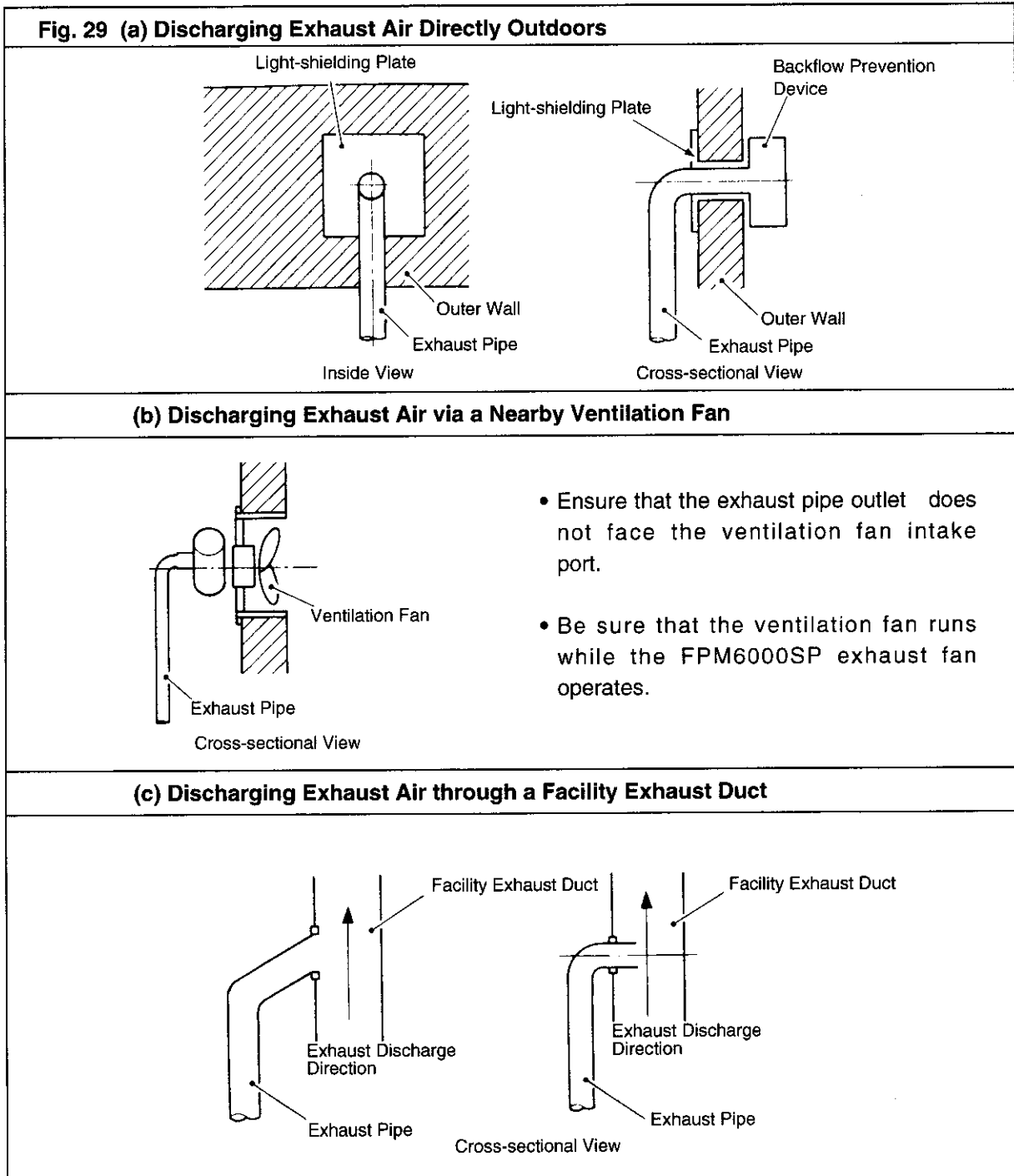
To keep the good working condition, air exhaust duct must be installed.

(1) Exhaust Methods

Be sure that the FPM6000SP exhaust air is discharged outdoors.

As shown in Fig.15, various methods are used to discharge the exhaust air outdoors. In any case, be sure there is no exhaust air reverse flow.

For the connections between the FPM6000SP and an external exhaust port, use the accessory flexible hose [75 mm (3 in.) OD, 2.5 m (8.3 ft.) long].



## 7.10 VENTILATION SYSTEM INSTALLATION

**⚠ CAUTION**

To keep the good operating condition in the dark room, Ventilation System should be install. The adverse effects of the moisture, heat, and gas generated from the film processor can be averted when a central air-conditioning system is provided (the optimum temperature and humidity ranges are 20 to 25 °C or 68 to 77 °F and 50 to 60 % RH, respectively). However, if a regular film processor room without an air conditioner is used, install a ventilation system to avert potential adverse effect.

## (1) Ventilation Requirements

## (a) Air Inlet (IN)

Furnish an air inlet with a cross-sectional area of 0.1 m<sup>2</sup> [about 30 cm (12 in.) square] or more, and position it so that its center is less than 80 cm (32 in.) above the floor level.

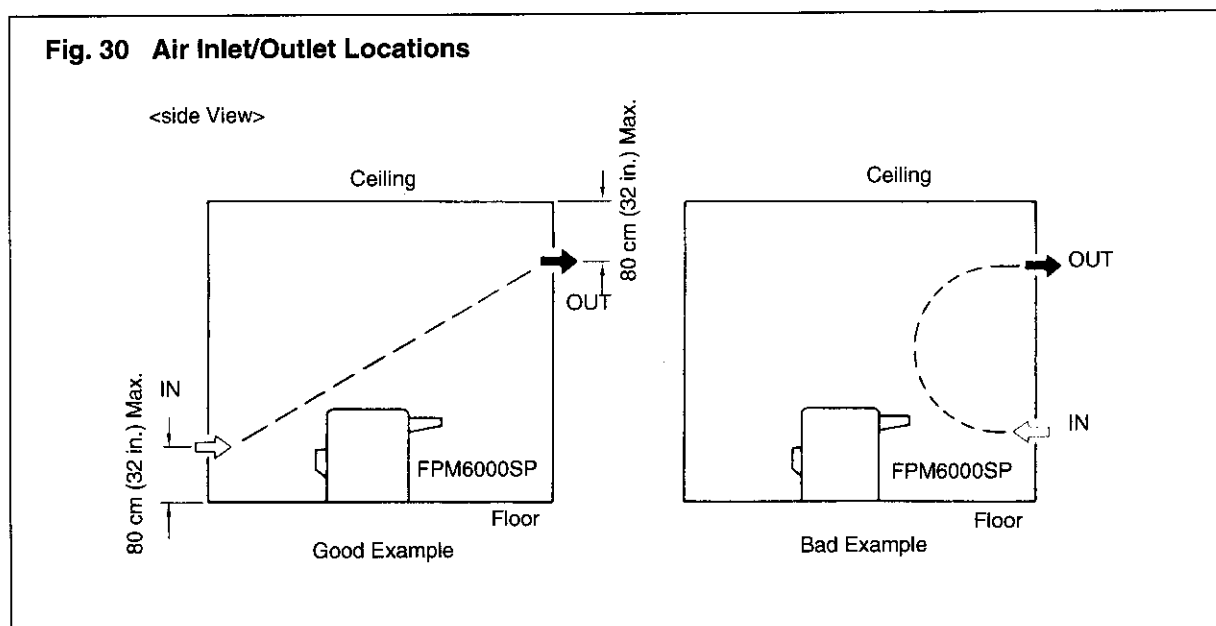
Ensure that the air inlet is positioned diagonally relative to the air outlet, both horizontally and vertically (see Fig.30 and 31)

**NOTE :** The air inlet in the darkroom must be provide with a light-shielding louver.

## (b) Air Outlet (OUT)

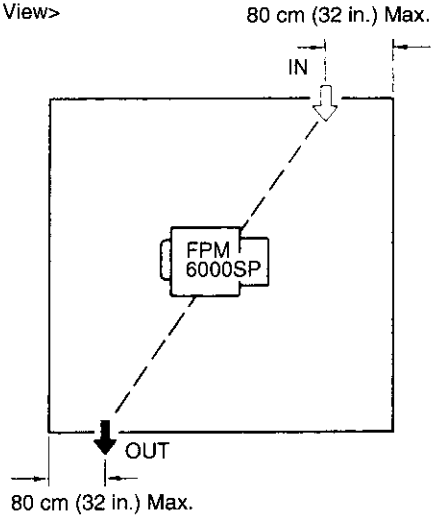
Install a small-size ventilation fan [air discharge specifications : cataloged maximum air discharge rate, about 10 m<sup>3</sup>/min within 80 cm (32 in.) from the ceiling. Be sure to run this fan constantly during film processing.

**NOTE :** The air outlet in the darkroom must be provided with a light-tight ventilation fan.

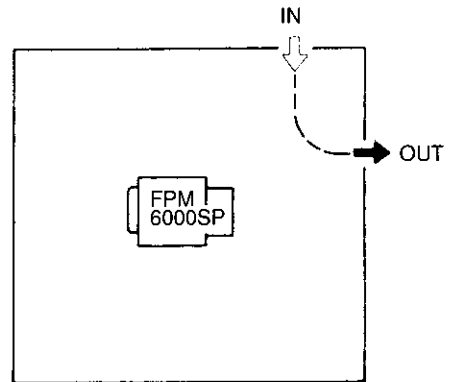


**Fig. 31 Air Inlet/Outlet Locations**

<Top View>



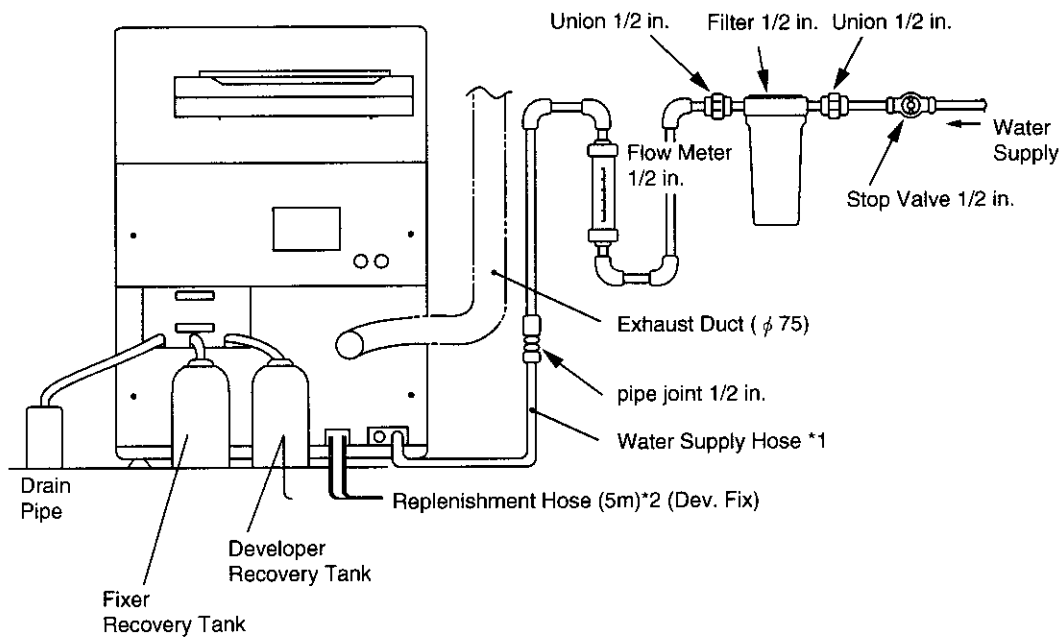
Good Example



Bad Example

**7.11 CONNECTION DIAGRAMS**

**Fig. 32 Connection Diagram**



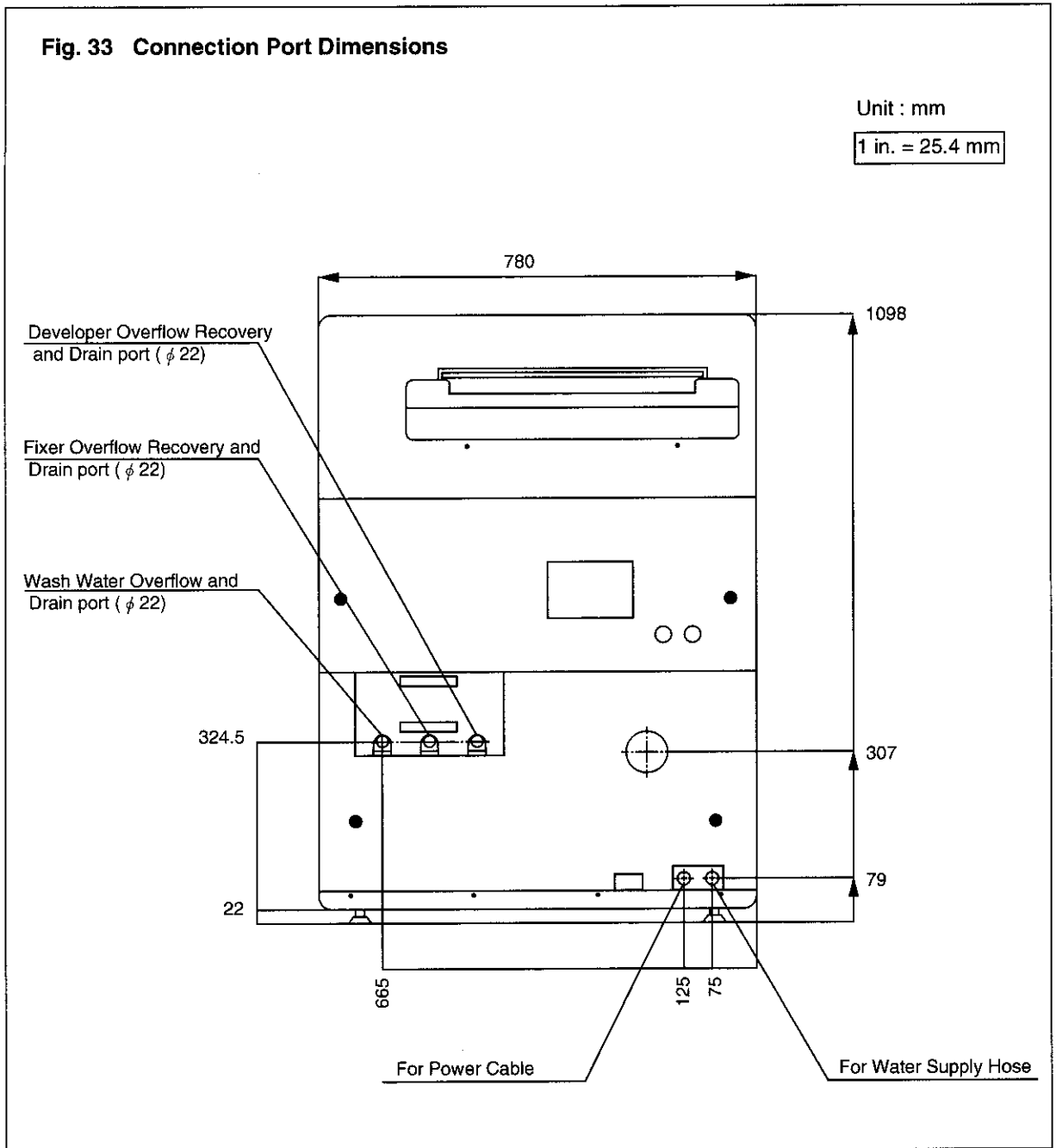
**NOTE\*1 :** The water supply hose is supplied as the standard accessory and other parts should be prepared locally.

**\*2 :** The replenishment hose is supplied with the chemical mixer or the replenisher tank.



## 7. PARTITIONING PROCEDURES

**Fig. 33 Connection Port Dimensions**



**7.12 ELECTRICAL WORK****⚠ WARNING**

Dangerous Voltage. Make sure that electrical work is undertaken only by properly authorized personnel.

[ FPM6000SP Connections ]

<b>Electrical requirements</b>	208/240 VAC 60 Hz Single phase (UL) 220/230/240 VAC 50 Hz Single phase 380/400/415 VAC 50 Hz 3 phase Y+N (TÜV)
<b>Voltage regulation</b>	±10 %
<b>Maximum power consumption</b>	Single phase 30 A ; 3 phase Y+N 10 A
<b>Ground</b>	The equipment should be connected to the protective earthing conductor in the building wiring.

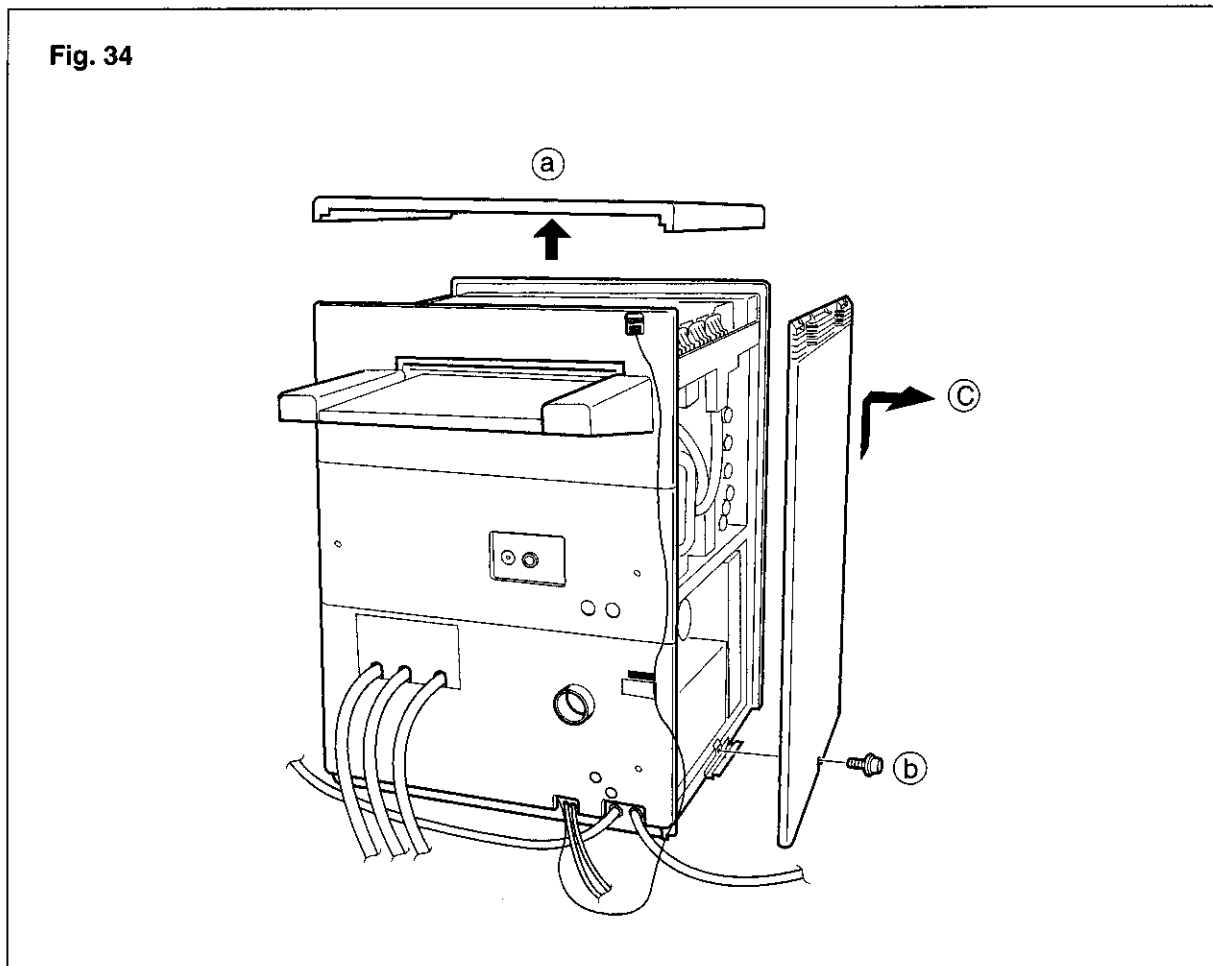
**7.12.1 Electrical Work**

- (a) Furnish a leakage circuit breaker as the wall-mounted circuit breaker. Mount this circuit breaker on the wall of the light room and complete wiring connections. Ensure that the switch is positioned as to assure operational ease. Also note that this switch doubles as the emergency switch. Therefore, the switch should be located within 5 m (16 ft.) of the film processor main body.
- (b) Be sure to make the proper ground connections.

**⚠ CAUTION**

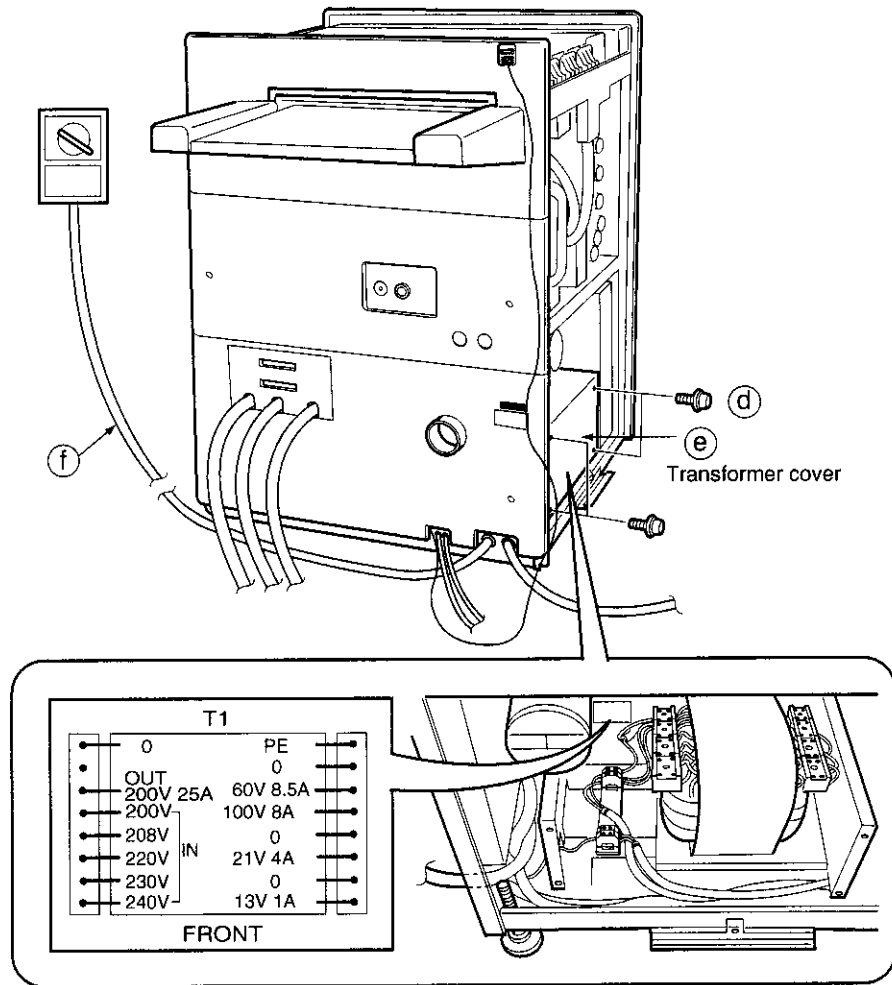
Avoid leaving electrical cables trailing where anyone may trip over them.

7.12.2 Power Cord Connection Diagram



- (1) Remove the top cover (a).
- (2) Remove a screw on the side panel (b).
- (3) Remove the side panel (c).

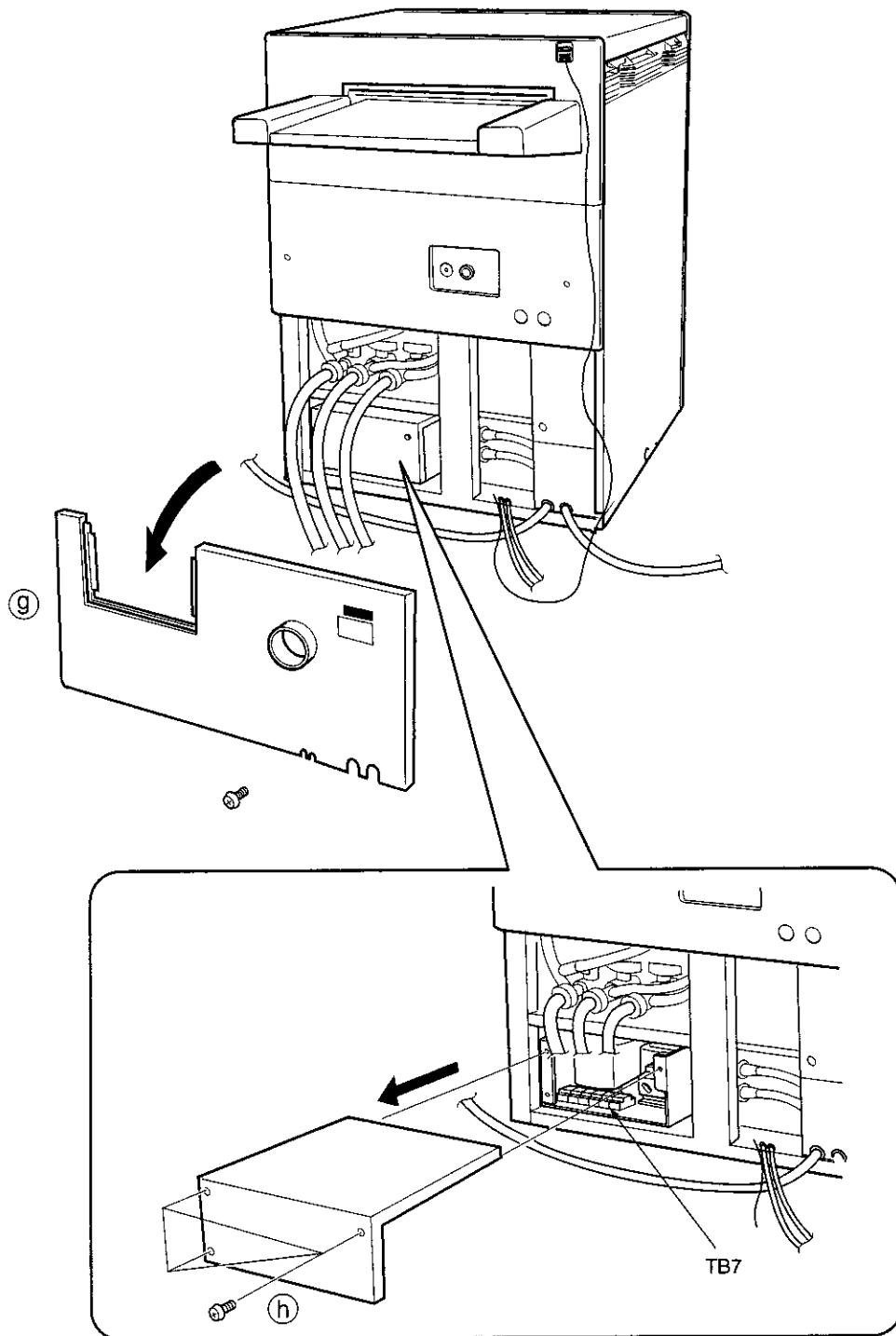
Fig. 35



- (4) Remove four screws on the transformer cover (d).
- (5) Remove the transformer cover (e).
- (6) Make the power cord connection between the processor and the wall-mounted circuit breaker according to the UL or TÜV GS or local regulations (f).
- (7) Connect the end of the power cord to the terminal strip in compliance with the individual power supply specification in.

\* Use cable of higher capacity than recommended.

Fig. 36 Check on transformers T2 and T3 voltage settings

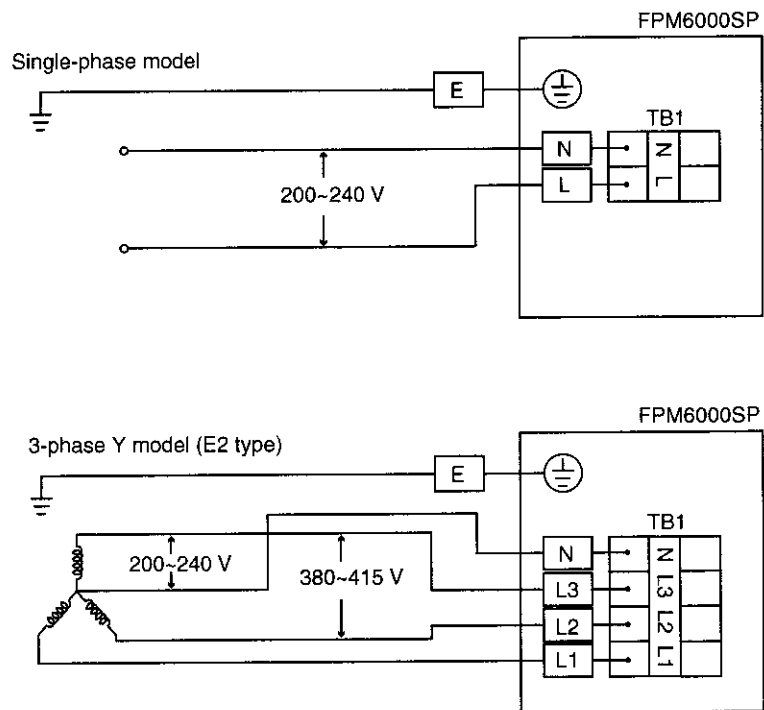


(8) Remove the under panel (g).

(9) Remove a transformer cover (h).

(10) Match the cables connected to T2-IN and T3-IN taps of TB7 to local power supply voltage.

Fig. 37 Power Cord Connection Diagram



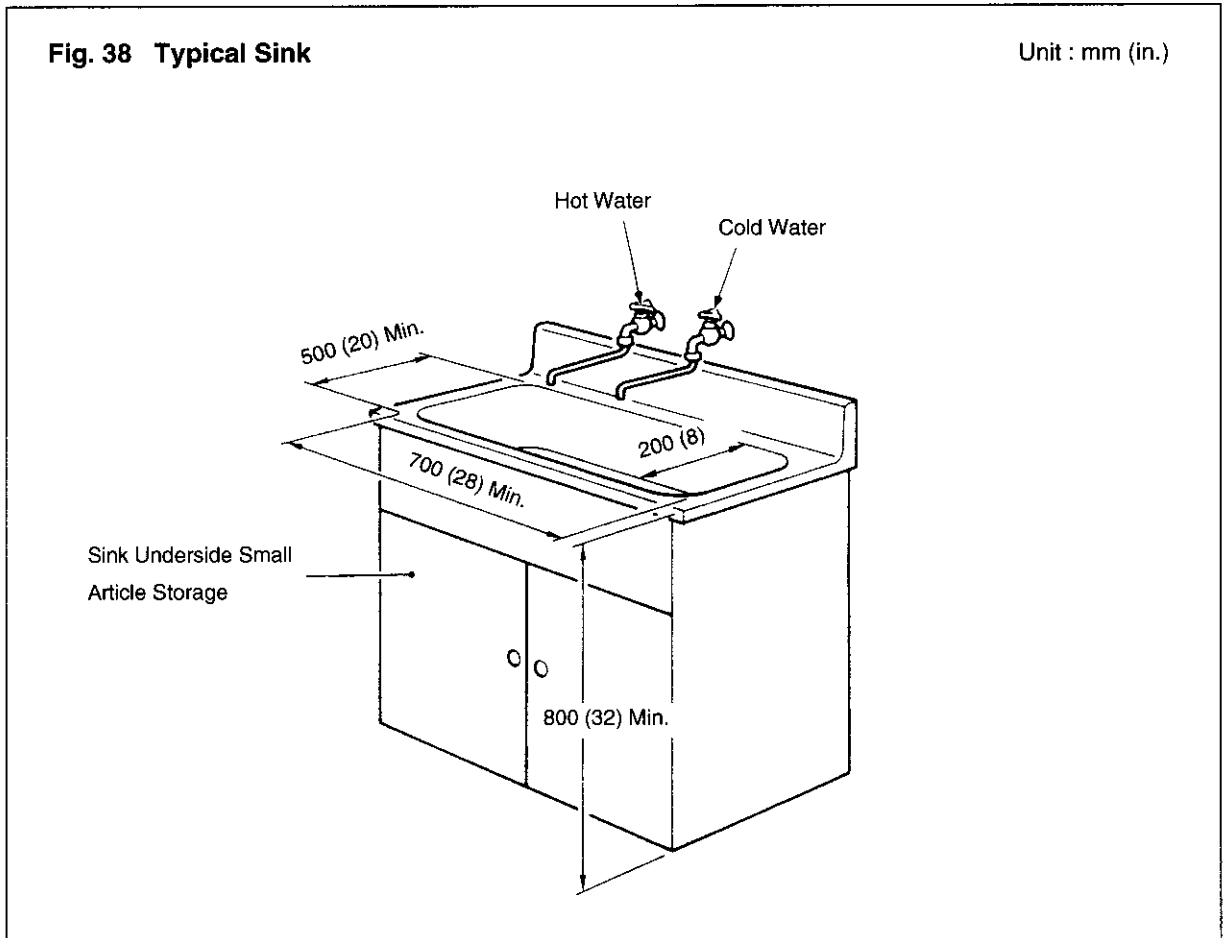
The ground cable should be longer than the power cord.

## 7. PARTITIONING PROCEDURES

### 7.13 SINK

A sink is recommended for FPM6000SP service, cleaning, and chemical mixing.

- (a) The sink should be furnished in the FPM6000SP installation room and positioned near the FPM6000SP wherever possible.
- (b) For rack cleaning purposes, the required minimum inside dimensions of the sink are 700 mm (28 in.) wide, 500 mm (20 in.) long, and 200 mm (8 in.) deep.
- (c) The recommended material for the sink is stainless steel (of SUS304 or higherrating) or hard PVC that exhibits high resistance to acidity and alkalinity.



# DATA REQUIRED FOR MACHINE INSTALLATION

## 8.1 ELECTRICAL

<b>Electrical requirements</b>	208 / 240 VAC	60 Hz	Single phase (UL)
	220 / 230 / 240 VAC	50 Hz	Single phase (TÜV GS)
	380/400/415 VAC	50 Hz	3 phase Y + N (TÜV GS)
<b>Voltage regulation</b>	± 10 %		
<b>Maximum power consumption</b>	Single phase : 30 A    3 phase : Y + N 10 A		
<b>Ground</b>	The equipment should be connected to the protective earthing conductor in the building wiring.		
<b>Main parts</b>	Motor : 24 VDC                      1 Unit (Drive) Heater : 200 VAC 750 W    1 Unit (Dev.) Heater : 200 VAC 570 W    1 Unit (Fix.) Heater : 200 VAC 1,370 W    2 Units (Dry) Heater : 100 VAC 500 W    2 Units (Heat Roller)		

## 8.2 AIR CONDITIONING

	Operating
<b>Air exhaust rate</b>	1.1 m <sup>3</sup> / min
<b>Air exhaust pressure</b>	10 mm Aq
<b>Air exhaust temperature</b>	35 to 50 °C ( 95 to 122 °F )
<b>Heat load to duct</b>	400 B.T.U.
<b>Heat load to room</b>	160 B.T.U.

## 8.3 WATER SUPPLY/DRAINAGE

<b>Water supply rate</b>	Wash water 3 Lit. / min ( 0.8 gal. / min ) maximum
<b>Water supply temperature</b>	Water temperature: constant-temperature water at a temperature that is at least 15°C and 5°C lower than the developing set temperature
<b>Water drainage rate</b>	Operating : 5 Lit. ( 1.3 gal. ) / min maximum Processing tank solution draining : 2.5 ~ 7.5 Lit. / min ( 0.7 ~ 2.8 gal. / min )

## 8.4 WEIGHT

<b>Required floor area</b>	: 0.62 m <sup>2</sup> (780×793 mm) or 6.7 ft <sup>2</sup> (30.7×31.2 in. )
<b>Weight</b>	: 257 kg ( 567 lb. ) with solutions 221 kg ( 487 lb. ) without solutions
<b>Transit weight</b>	: 175 kg ( 387 lb. ) without racks and solutions





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