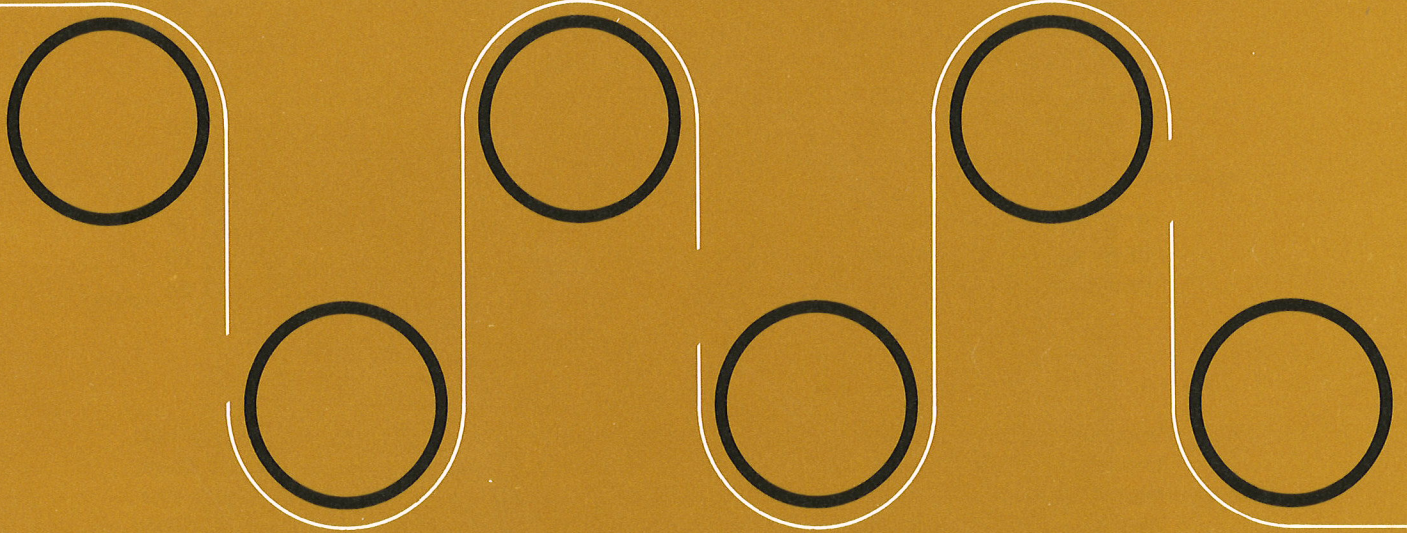




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2/82

# INSTALLATION INSTRUCTIONS



RAPID PROCESSING

***KODAK* Industrial *X-OMAT* Processor**

MODEL B

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### IMPORTANT

Improvements in film and/or chemicals may change the operating temperatures and the chemical-replenishment rates provided in this manual. Use the temperatures and the rates recommended in the current KODAK X-OMAT Processor Service Bulletin. These are available from your Kodak Technical Sales Representative, your dealer who markets KODAK X-OMAT Processors, and Equipment Systems Operations, Health Sciences Markets Division, Eastman Kodak Company, Rochester, New York 14650.

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#### Note

Use qualified personnel to install the PROCESSOR.

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## INTRODUCTION

The KODAK Industrial X-OMAT Processor, Model B, is designed to process x-ray film (sheet and roll) into uniformly high quality radiographs and to give continuous and reliable service.

The installation procedure is not difficult, but it does require attention to detail in order to obtain optimum, trouble-free performance. The critical adjustments have been made at the factory. The adjustments which must be made during installation are fully explained in this manual.

## SPACE REQUIREMENTS

The area in which the processor is to be used will vary from installation to installation, depending upon the needs of the particular department. Information regarding processor dimensions, drain locations, etc, is shown in the Site Specifications, Figures 21 through 26, and the Service Requirements, Figures 27 and 28.

The processor occupies approximately 10 square feet (3 m<sup>2</sup>) of floor space. Either side of the processor can be installed against the wall. Normally, a minimum of 30 inches (76.2 cm) should be allowed for service clearance

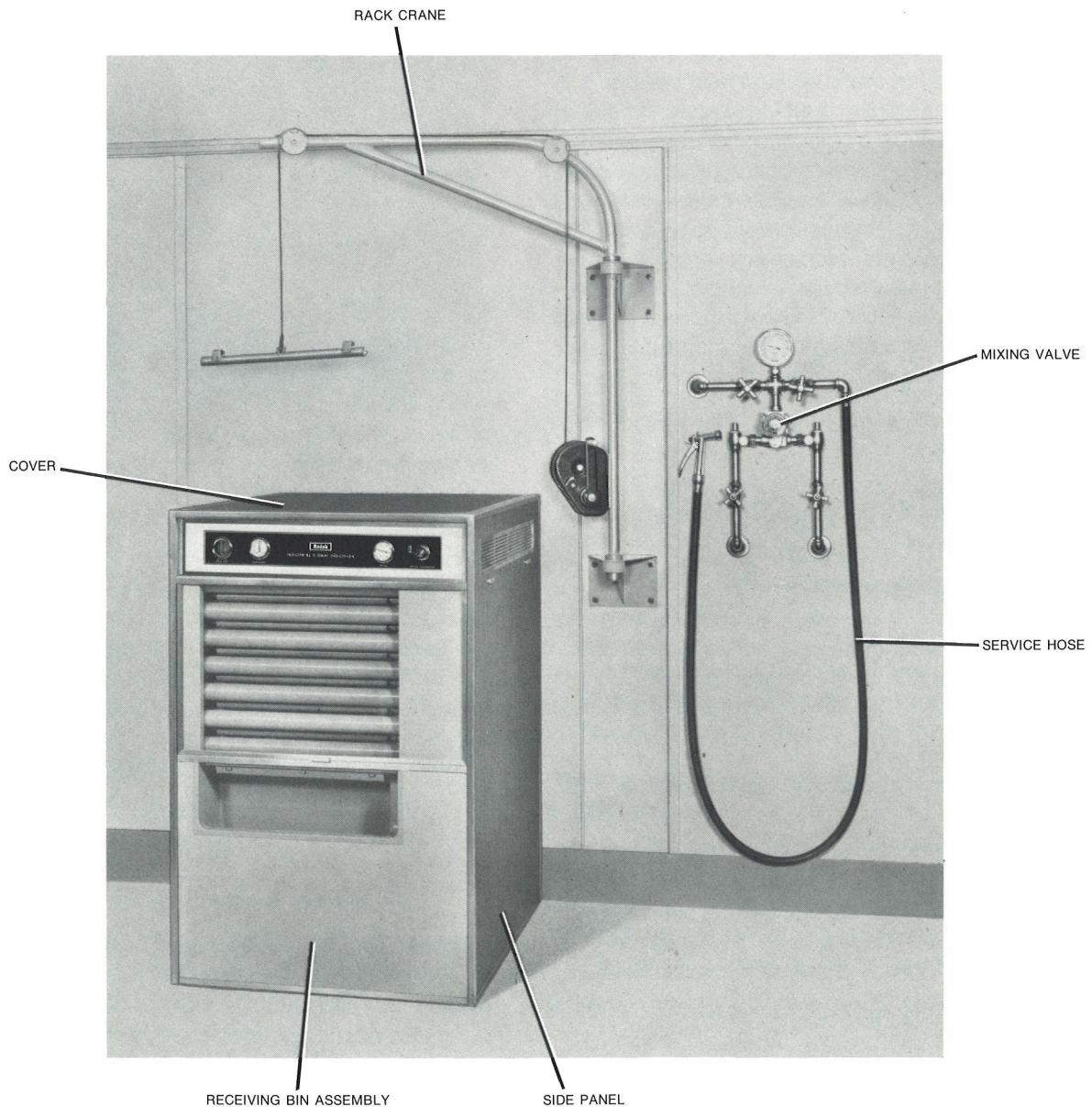


FIGURE 1

at the operating side and 18 inches (45.7 cm) at both ends. If space is limited, the clearance at the operating side of the processor can be reduced to 18 inches (45.7 cm). Also, the 18-inch (45.7 cm) operating clearance at the dryer end of the processor can be reduced to 12 inches (30.5 cm). However, if space permits, the larger clearances are preferred for ease in daily cleaning and periodic maintenance.

The processor extends approximately 15 inches (38.1 cm) into the darkroom and approximately 34 5/8 inches (87.6 cm) into the light-room area. See Figures 25 and 26.

Space must be provided for two 30-gallon (114 L) or 55-gallon (208 L) replenisher tanks. Each 30-gallon (114 L) tank is 22 inches (55.9 cm) in diameter and 27 3/4 inches (70.5 cm) high. Each 55-gallon tank is 24 inches (60.1 cm) in diameter and 35 3/4 inches (90.8 cm) high. They should be installed as close to the processor as possible. It is recommended that the tanks be elevated approximately 4 inches (10.02 cm) above the floor; however, the tops of the tanks must be no higher than 37 inches (94.0 cm) from the floor. If space is at a minimum, the tanks can be located on the floor below provided the replenisher pump assembly is removed from the processor and is installed on the same level as the tanks. If space is available, it is desirable to provide a wash area nearby for the processor racks. If convenient, it is suggested that the replenisher tanks be installed in the wash area as shown in Figures 23 or 24.

## WALL OPENING

For dimensions of the wall opening, see Figure 21. Note that the perimeter of the wall opening must be flush on the side facing the processor.

## SERVICE REQUIREMENTS

### NOTE

All service must meet local plumbing and electrical codes. The service requirements are described in the following paragraphs and are illustrated in Figures 27 and 28.

## Electrical

The processor is normally supplied for 230-volt, 3-wire, single-phase, 60-hertz service. On special order, the processor can be supplied for 230-volt, 3-wire, single-phase, 50-hertz service. The voltage limitations on the low-voltage line are 125 volts maximum and 105 volts minimum; on the high-voltage line, 250 volts maximum and 208 volts minimum. See the Electrical Connections section.

The electrical power requirements for the processor are 10 kilowatts for the 230-volt, 3-wire, single-phase, 50- or 60-hertz service with a maximum of 45 amperes. If a 230-volt, 3-wire, single-phase service is not available, it will be necessary to purchase locally a 10 kVA minimum,

single-phase transformer with primary winding to operate on the local service voltage with a center-tap secondary winding providing 115 volts between center tap and each leg and 230 volts between the two legs. (See the Circuit Diagram, Figure 19).

## Water

The processor is supplied with properly tempered water by a thermostatically controlled MIXING VALVE, figure 1.

### NOTE

When installing the mixing valve, use pipe hangers for extra support. Also, be sure that the hot water is installed on the left and the cold water on the right.

The volume of water is automatically controlled within the processor to 3 1/2 gallons per minute (13.5 L/min.) by means of a fixed-flow regulator. To provide proper temperature regulation, 30 to 65 pounds (20 to 448 k Pa) of line pressure must be supplied to both sides of the mixing valve. The hot-water temperature must be at least 15°F (8.3°C) above the temperature set at the mixing valve. Refer to Service Requirements and Connections, Figure 27, for a typical piping installation.

If the cold water exceeds 80°F (26.6°C), refrigerated water will have to be used.

For cleaning and chemical mixing purposes, install a SERVICE HOSE, Figure 1, of sufficient length to reach the processor tanks. If the replenisher tanks are located remotely, a hot- and cold-water service with a mixing faucet is recommended. These services should be installed according to local codes.

## Drains

One 4-inch open FLOOR DRAIN, Figure 2, is recommended. However, any drain that will accommodate a normal flow of 3 1/2 gallons per minute (13.3 L/min) and a tank-draining flow of 8 gallons per minute (30.8 L/min) will be adequate. For ease in cleaning the drain, install a tee or cross. For location of the drain in relation to the processor, see Figure 28. A floor drain, Figure 23, in the rack-cleaning area is also recommended. The floor should be pitched toward these drains.

### CAUTION

Do not use brass or copper drain lines.

## Exhaust

A 3-inch duct connection is used for the dryer's AIR EXHAUST. It can be piped through the floor, wall, or ceiling, either to a building duct or directly outside.

### NOTE

If the processor exhaust is to be connected to a building duct, a minimum 2-inch break must be made between the exhaust and the duct.



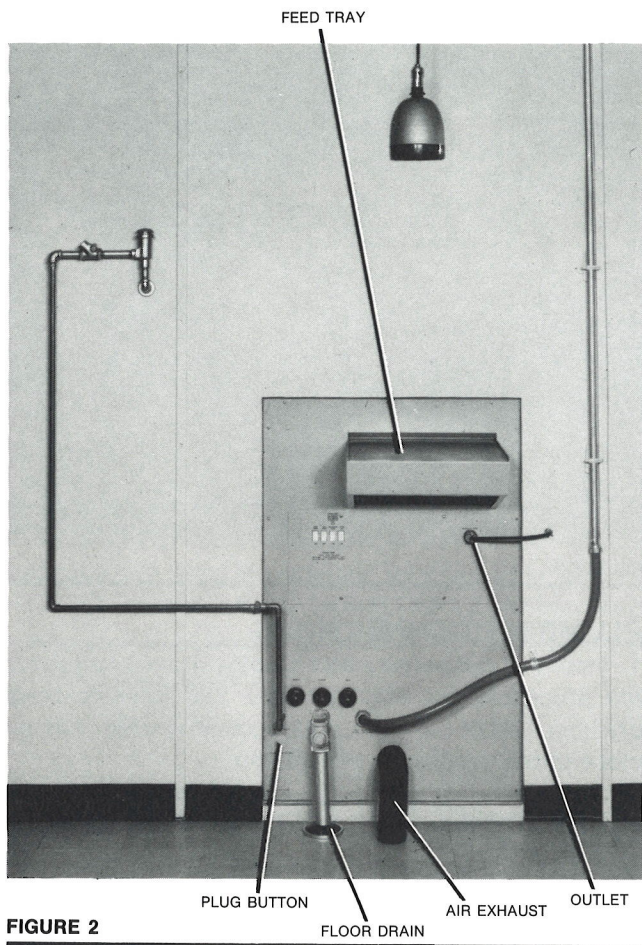


FIGURE 2

If a 5- to 10-foot (1.5 - 3.1 m) run with two elbows is employed, the use of a 3-inch duct can be continued. If a longer run is necessary, the following information will be helpful:

- For a 10- to 25-foot (3.0 - 7.6 m) run with 2 or 3 elbows, use a 4-inch duct.
- For a run of 25 feet (7.6 m) or more with 3 or 4 elbows, use a 6-inch duct.

An alternate through-the-floor exhaust is also provided in the light-room area. See Figures 27 and 28.

The dryer's exhaust is 200 ft<sup>3</sup>/min (5.6 m<sup>3</sup>/min) at 150°F (65.5°C) at full capacity.

### INSTALL THE KODAK MANUAL RACK CRANE, Model 1 (Optional Accessory)

The RACK CRANE, Figure 1, facilitates the installation and removal of the roller racks from the processor tanks. The crane can be used on either side of the processor. Install the crane before the processor is moved into position. Figure 27 shows the ceiling-height and mounting requirements. Instructions for installation and operation are included with the crane.

## UNPACKING THE PROCESSOR

Check the contents of the case against the packing list attached to the outside. The buffer motor and bracket assembly is packed directly over the heat exchanger.

## REMOVING THE PROCESSOR FROM THE SKID

Remove everything except the processor from the skid. Then remove the processor COVER, SIDE PANELS, and RECEIVING BIN ASSEMBLY. All of these components are removed by lifting up and then out at the bottom.

### CAUTION

To remove tape residue from the processor, any cleaning agent recommended for vinyl surfaces should be satisfactory. *Do not* use solvents or harsh abrasives.

To remove the processor from the skid, proceed as follows:

- Remove the lag screws and the leveling screw from each of the four hold-down clamps. *Do not* use the hold-down clamps for mounting the processor.
- Slide the processor crosswise off the skid.
- Replace the leveling screws. See Figure 22.

### WARNING

Since the processor weighs approximately 600 pounds (272 KG), use every safety precaution to avoid personal injury in removing the processor from the skid.

## INSTALL THE LIGHT-LOCK STRIP

### CAUTION

*Do not* stretch the foam strip while applying it.

A length of light-locking foam strip is provided. Cut the strip to the proper lengths. Remove the adhesive backing and press the strips to the edges of the processor at the end next to the wall opening.

## INSTALL THE BUFFER MOTOR AND BRACKET ASSEMBLY

- With the screws provided, mount the assembly on the idle side rack-support bar. *Do not* tighten the screws at this time.
- Dress the motor cord above the tank trough and fasten it in the cable clamp provided. (See Figure 3.)

## POSITION AND ALIGN THE PROCESSOR

- Adjust the leveling screws so that the processor is at least 1/2 inch (13 mm) but not more than 1 inch (25 mm) from the floor.
- Slide the processor into position so that it is within approximately 1 inch (25 mm) of the wall opening. Center the processor in relation to the sides of the opening.

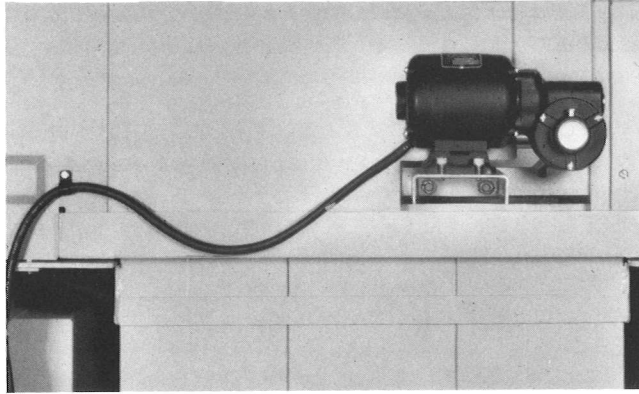


FIGURE 3

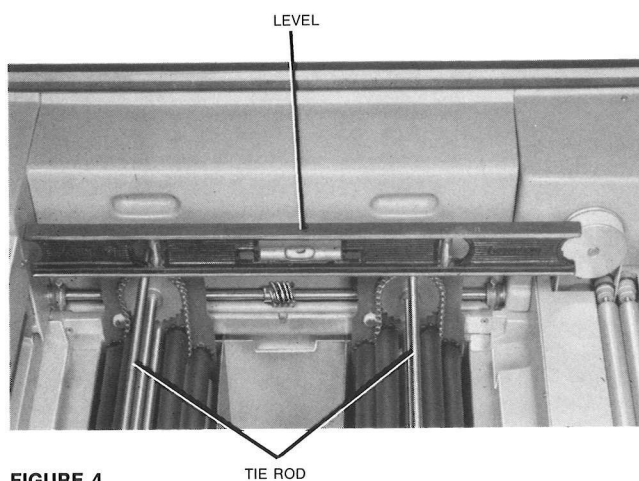


FIGURE 4

3. Place a stainless-steel cup under each of the four leveling screws. It is advisable to keep the processor as close to the floor as possible.

#### WARNING

*Do not* extend the leveling screws more than 1 inch (25 mm) from the base. If the screws are turned all the way out, serious injury may occur to hand or foot.

4. Note that the racks are numbered. The No. 1 rack goes into the tank nearest the light lock, the others follow in sequence. Install the No. 1 (developer) rack and the No. 3 (wash) rack in their respective tanks. Be sure that these racks are seated firmly.

5. Make a lengthwise check of the processing section by placing a general-purpose LEVEL, Figure 4, across the TIE RODS of the two roller racks. Check the cross-wise level by placing the level across the rack TIE RODS. Make adjustments by raising or lowering the leveling screws. Push the processor into its final position and recheck to be sure that it is level and forms a light-tight seal at the wall opening.

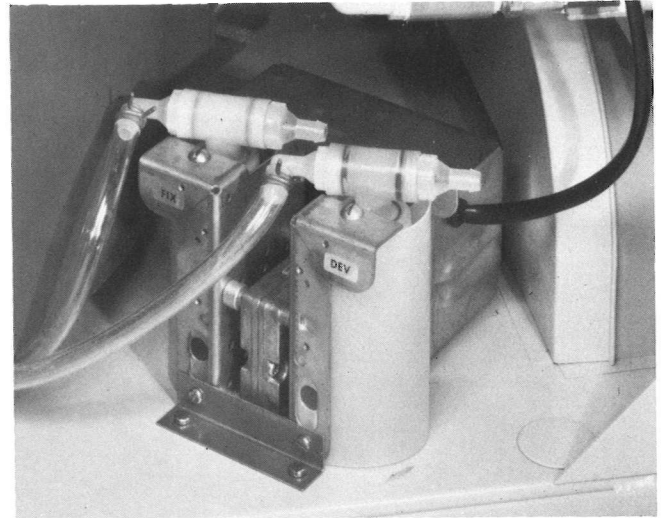


FIGURE 5

### PLUMBING CONNECTIONS

1. Incoming tempered water and the drain location for the processor are shown in the Site Specifications drawing. Install a union on the incoming water line as close to the processor as possible.

#### CAUTION

*Do not* use brass or copper in the drain lines.

2. Use flexible plastic tubing or a pipe from the processor drain fitting to the floor drain. Provide a minimum 1-inch break in the line from the processor to the drain. If a solid connection to the drain is required, an air vent must be provided in the area of the tee or cross. The vent is not to exceed 10 inches (25.4 cm) above the processor drain outlet. Also, provide a union to allow for easy processor removal for major servicing. The drain piping must be at a continuous pitch with no kinks or loops.

3. If it is necessary to locate the solution drain in the light-room area, refer to the Suggested Piping Layout, Figure 6. Pitch the processor drain to meet local code requirements.

4. A hole, covered by a PLUG BUTTON, Figure 2, is provided for conducting the fixer overflow to a silver-recovery device if desired.

### ELECTRICAL CONNECTIONS

1. The electric feed for the processor should conform with the latest National Electrical Code and any local codes that prevail. The feed (three No. 8 AWG, Type RH, RH-RW, RHW, or THW wires) should be run in a 1-inch rigid conduit or a flexible conduit as specified in the above-mentioned codes.



2. Pull the feed wires through the conduit and into the ELECTRICAL CONTROL PANEL, Figure 7, and connect them to the terminals marked L1, L2, and N.

3. Since there is no main switch furnished on the processor, a disconnect switch in the feed line must be installed close to the processor in the light-room area. For the processor service, a 2-pole, 60-ampere disconnect switch is required.

4. Upon completion of all wiring connections to the processor, make sure that all of the switches at the electrical control panel are in the OFF position. The feed can then be energized and the disconnect switch closed. The processor is now ready to operate electrically.

5. An accessory OUTLET, Figure 2, provides service for a safelight that can be mounted above the feed tray. The safelight circuit is designed as a visual film-feeding signal which turns the safelight off when a film is being fed and on when film can be fed. This outlet operates in

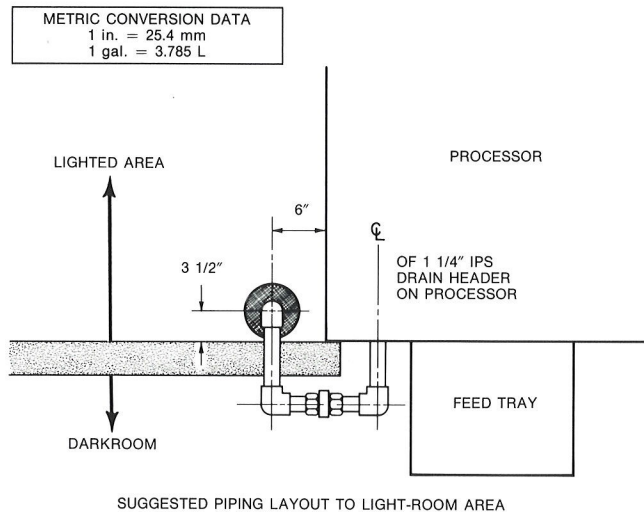
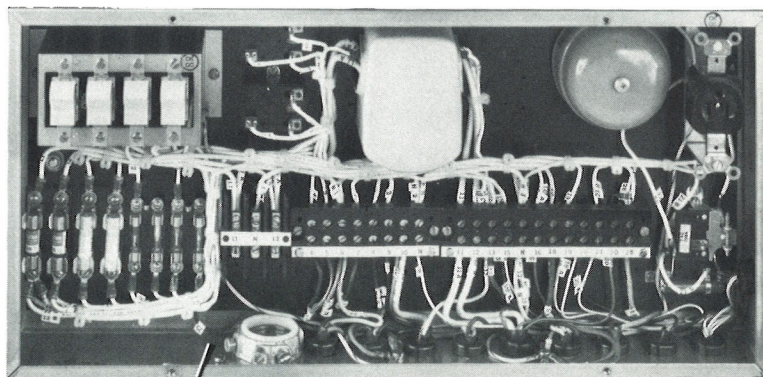


FIGURE 6



ELECTRICAL CONTROL PANEL

FIGURE 7

conjunction with a time-delay circuit, and since this circuit can safely carry a maximum load of only 3 amperes, devices requiring heavier current should not be used.

## AIR EXHAUST

1. See the Service Requirements and Connections drawing for the exhaust openings. If the standard installation is used, connect a 3-inch duct or elbow to the processor. (See Figure 2.)

### NOTE

If the processor exhaust is to be connected to a building duct, a minimum 2-inch break must be made between the exhaust and the duct.

2. If the through-the-floor exhaust at the dryer end is used, proceed as follows:

- Loosen the screw in the lower plenum strap.
- Remove the four lower plenum mounting screws.
- Loosen the clamp at the base of the plenum and remove the lower plenum.
- Remove the cap at the base of the processor under the plenum.
- Bring the external duct (not supplied) far enough through the opening in the processor to make a connection with the plenum.
- Replace the lower plenum and tighten the clamp and the strap.

## REPLENISHER SYSTEM

- Remove the packing material from the replenisher tanks.
- Fifty feet (15 m) of plastic tubing is supplied to feed the developer and fixer solutions from their respective tanks. The REPLENISHER TUBINGS (Figure 5) should be no higher than the replenisher inlets.

3. If the tanks are located in the darkroom, run the tubing from the replenisher tanks to the feed end of the processor. Feed the replenisher tubing through the replenisher inlets and connect the tubings to the correct inlets on the replenisher pump.

4. If the tanks are in the light-room area, run the tubings under the processor, remove the replenisher plug bottoms, feed the tubings through the holes, and connect them to the correct inlets on the replenisher pump.

5. Install the strainer assemblies in the replenisher tubings. To do this, cut the tubings at any convenient locations between the processor and the replenisher tanks.

### WARNING

Use eye protection.

Use the correct pliers to install a spring-type clamp.

Opening the clamp too much will cause it to lose tension or it may break.

## PREPARE THE PROCESSOR FOR INITIAL TEST AND OPERATION

1. Turn on the main power disconnect switch and the replenisher pump switch.

### WARNING

The detector switches are energized. *Do not* remove the plastic guard.

2. The switches on the DETECTOR ROLLERS, Figure 8, control the operation of the replenisher pump. To adjust the switches, remove the switch cover, place one strip of film, cut approximately 4 inches (10.0 cm) wide between the detector rollers at one end, and adjust the NUT until the pump operates. Then tighten the nut 1/8 turn. (Tightening the nut lowers the switch plunger on the roller detector.) Repeat this procedure for the opposite switch.

3. Align the buffer motor and rack gears, allowing a small amount of backlash between the gears. It may be necessary to move the gear on the motor shaft to align it with the rack gear. Tighten the bracket mounting screws.

4. Remove the racks from the processor, and use a clean wet sponge to remove any foreign matter by wiping down the inside of the processor tanks and the replenisher tanks.

5. Mix the processing solutions in their respective tanks in accordance with the instructions in their containers.

### CAUTION

To prevent oxidation, use the floating lid in the developer replenisher tank.

6. Close the drain valves. To allow the wash tank to drain when the processor is not in use and thus discourage bacterial growth, open the wash tank drain valve slightly.

7. Fill the fixer tank to the FILL LINE, Figure 9.

### CAUTION

Developer can be badly contaminated with small amounts of fixer. The processor fixer tank should be filled first so that any solution spilled into the developer tank can be removed. Use the SPLASH GUARD, figure 10. Place it between the developer and the fixer tanks before filling the processor fixer tank. This guard should also be used when

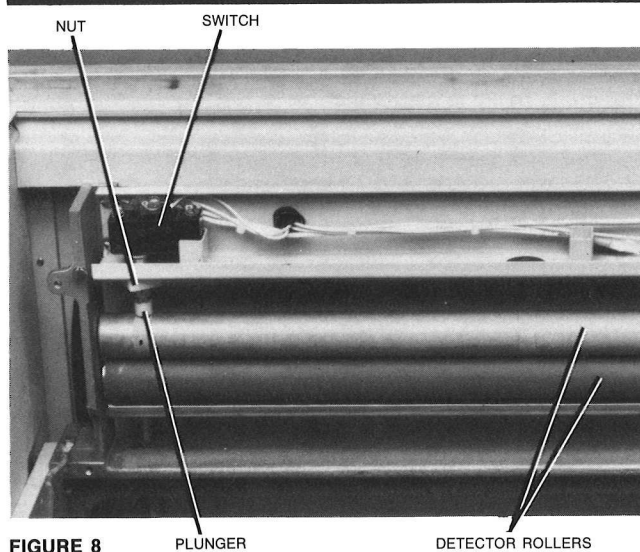


FIGURE 8

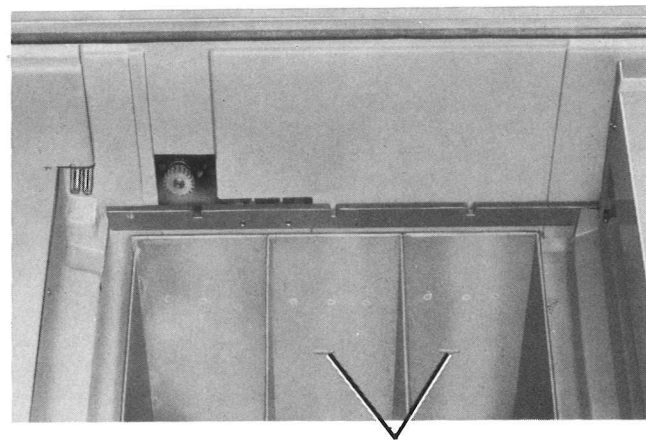


FIGURE 9



ever the fixer rack is being removed or replaced. Rinse the guard after each use.

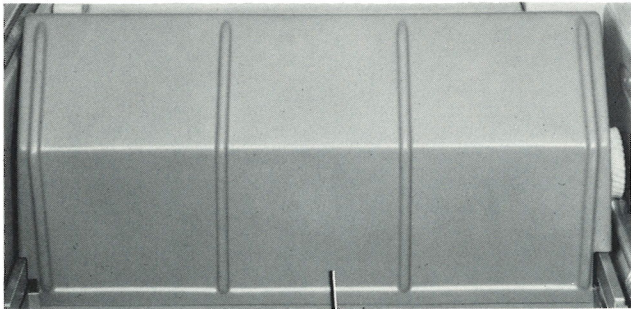
8. Pour approximately 2 gallons (7.6 L) of developer solution into the developer tank. Add developer starter solution according to the manufacturer's specifications. Fill the tank with developer solution to the fill line.

**CAUTION**

Check all plumbing connections for leaks.

9. Before placing the processing racks in their respective tanks, operate them by hand to be sure that all rollers rotate. When installing the racks, be sure that they are seated firmly.

10. Check the squareness of the FEED TRAY, Figure 2. Place a 14 by 17-inch (35 x 43 cm) film against a side guide



SPLASH GUARD

FIGURE 10

of the feed tray and feed approximately 1 inch (25 mm) into the processor. Pull the leading edge of the film to, and square with, the tie rod of the first rack. If the film is not square with the tie rod, loosen the wing nuts located under the feed tray and square the tray to the edge of the film. Tighten the wing nuts.

11. Install the crossover assemblies. The entrance crossover is just ahead of the developer tank, followed by the developer-fix, and fixer-wash, and the squeegee crossover assemblies. Be sure that they are seated firmly.

12. Place the CROSSOVER COVER GUARD, Figure 11, over the developer-fixer crossover as shown.

13. Connect the alligator clip to the end of the screw which secures the static eliminator to the entrance crossover.

14. The developer-heater thermostat has been set at  $81 \pm 1^\circ\text{F}$  ( $27.2 \pm .5^\circ\text{C}$ ). To make any necessary adjustments of the developer heater to meet the manufacturers' specifications for water or solution temperatures:

- a. Remove the plumbing cover guard.
- b. Turn the adjusting screw clockwise to increase the temperature, counterclockwise to decrease the temperature.

**NOTE**

When the heater is on, the glow lamp is on. See Figure 13.

15. See the manufacturer's specifications for recommended replenishment rates.

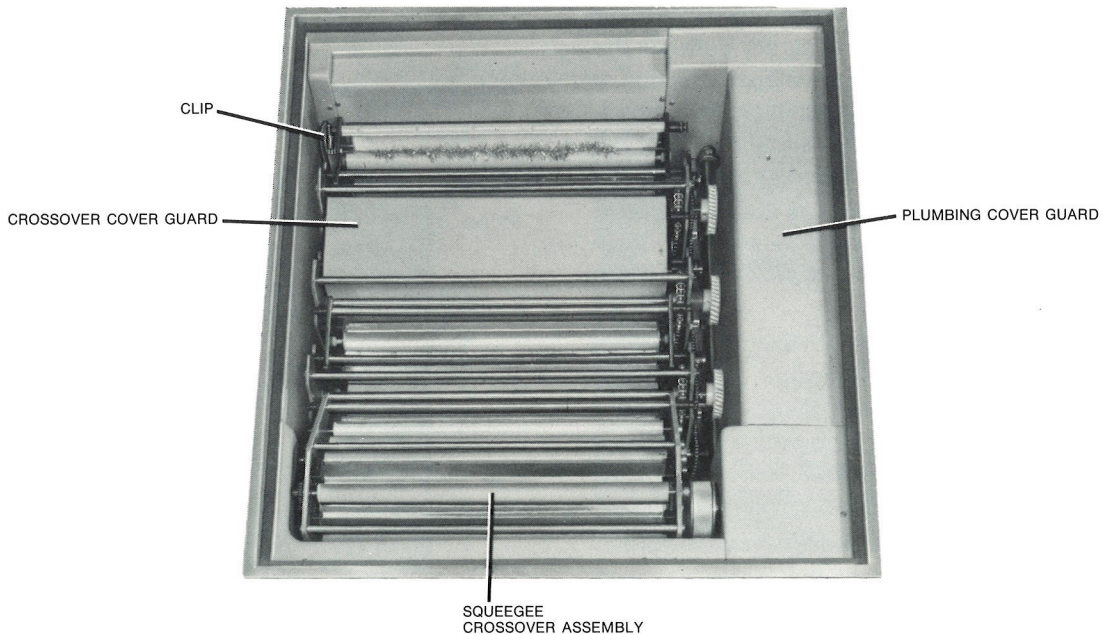
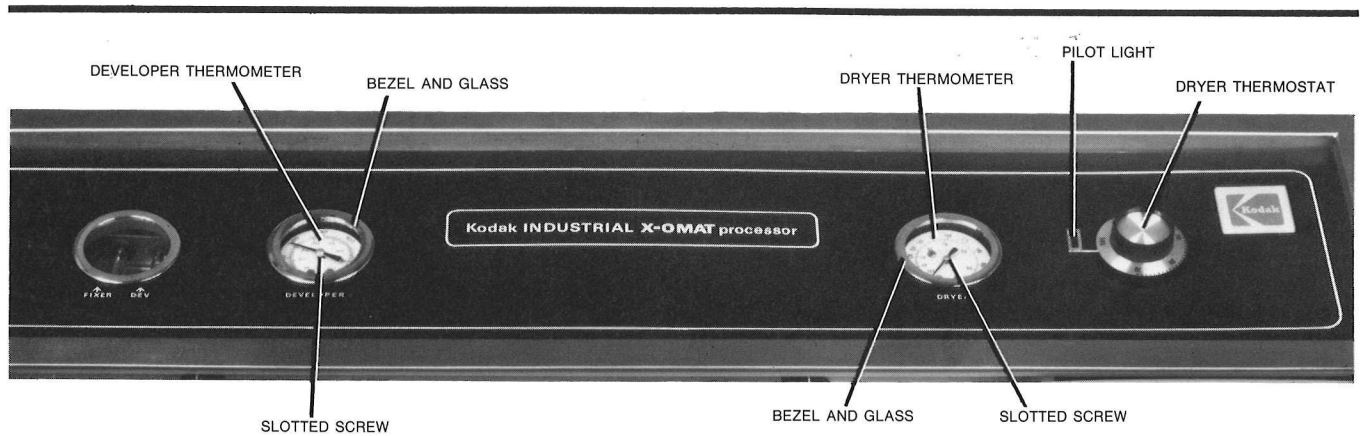


FIGURE 11



**FIGURE 12**

16. Replace the side panels and the receiving bin assembly. Before replacing the non-drive side panel, install the BUFFER MOTOR GUARD, Figure 14. To do this, remove the protective covering from the self-adhering tape on the guard; center the guard over the opening in the side panel; then apply pressure around the flange of the guard to be sure it adheres to the panel.

17. Turn on the remaining switches.

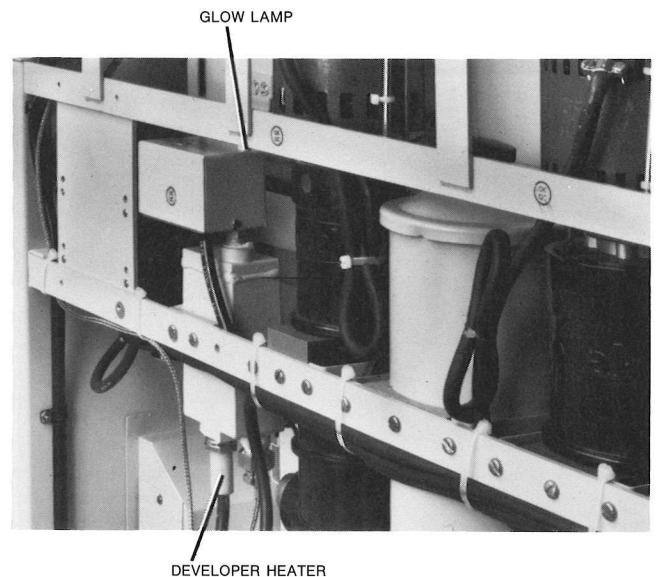
18. Set the DRYER THERMOSTAT, Figure 12, at the lowest possible temperature consistent with good drying (depending upon ambient conditions and number and types of film fed). Normally, it takes approximately 10 minutes for the dryer to come up to temperature. When the PILOT LIGHT is lit, the dryer heaters are on.

19. Due to possible jarring during shipment, it is advisable to check the processor thermometers to be sure of their accuracy.

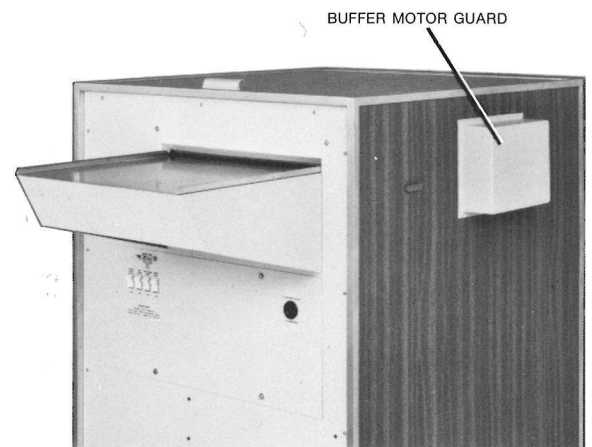
20. Hold a thermometer of known accuracy between the developer rack side plate and the developer tank end. If the reading of the developer thermometer is incorrect, the pointer should be reset. To do this, first pry off the BEZEL AND GLASS. Then, while holding a finger against the dial to keep the pointer from moving, with a screwdriver turn the slotted screw counterclockwise to move the pointer clockwise, and vice versa. Replace the bezel and glass.

21. Check the DRYER THERMOMETER by placing a thermometer of known accuracy, with the bulb up, in the left-hand corner of the dryer. Be sure that the bulb of the thermometer does not touch any surface. If the reading is incorrect, the pointer should be reset. To do this, follow the same procedure as for the developer thermometer.

22. Also check the water thermometer on the Thermostatic Mixing Valve. Because of the water passage through the developer heat exchanger and the distance from the thermometer, a temperature increase of 1 or 2 degrees in the wash tank is normal.



**FIGURE 13**



**FIGURE 14**



Feed a 14 x 17-inch (35 x 43 cm) unprocessed film into the processor.

23. Approximately 8 seconds after the trailing edge has passed the detector rollers, a bell sounds, indicating that another film may be fed. Feeding film at this signal prevents film overlapping and the resulting failure of film to transport properly.

24. To adjust the time delay, move the slider on the variable resistor (R-7 on wiring diagram) located below the K-2 relay. Move the slider to the left to increase the time delay.

25. Feed several 14 by 17-inch (35 x 43 cm) test films into the processor. Always use the side guide of the feed tray when feeding. Observe the film movement through the processing section, the squeegee crossover, and the dryer. Also, note that, when film is passing through the detector rollers, the flow-indicator balls are pulsating. This indicates the replenisher pumps are operating properly.

---

#### NOTE

The first few films through the processor may have a dirty surface. This is dirt pickup from the rollers and disappears as more films are fed. In daily use, it is recommended that two or three test films be fed when the processor is first turned on. This will remove any foreign matter which may have accumulated during the shutdown period.

---

### ADJUSTING REPLENISHMENT RATES

To Measure Replenishment Rates

1. Remove the side panel from the non-drive side.

#### CAUTION

Some solution will spill when the quick disconnect is separated.

2. Remove the clip and separate the quick disconnect.
3. Hold a graduate under the upper half of the quick disconnect.

---

#### NOTE

The detector switch assemblies operate the replenisher pump.

---

4. Operate the pump until the solution fills the tubing.
5. Empty the graduate and hold it under the upper half of the quick disconnect.
6. Feed a 14 x 17 inch (35 x 43 cm) test film.
7. Measure the solution. See the manufacturer's recommendation for proper amount.

---

#### NOTE

If the non-drive side of the processor is installed against the wall, remove the following:

The PROCESSOR COVER, Figure 1.

The SQUEEGEE CROSSOVER ASSEMBLY, Figure 11

The EXIT END GUARD, Figure 9

Do steps 2 to 7 above.

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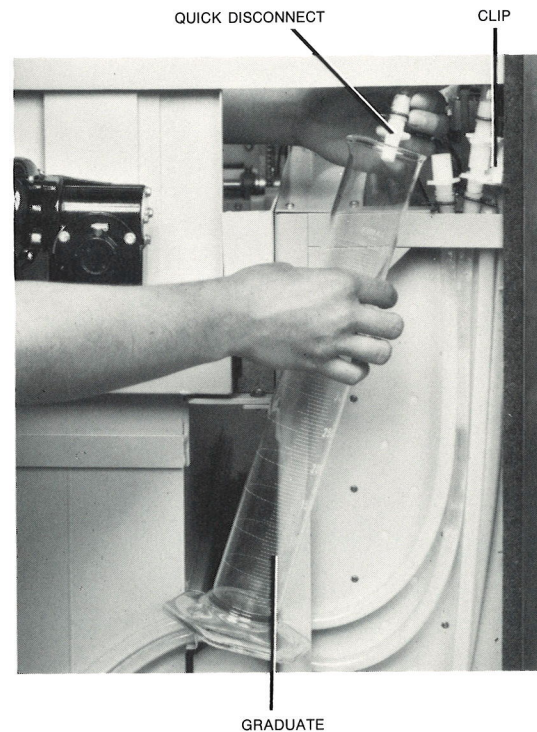


FIGURE 15

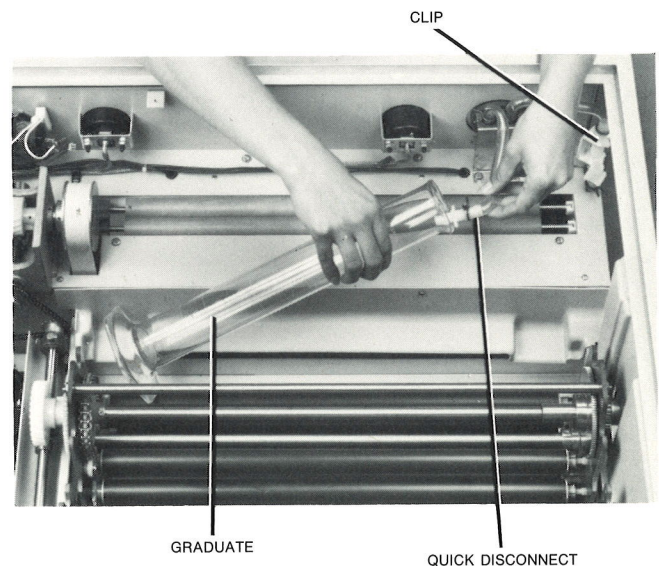


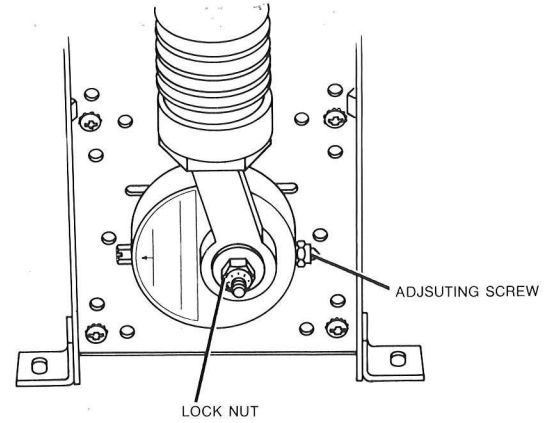
FIGURE 16

To Adjust Replenishment Rates

1. Hold the graduate under the quick disconnect.
2. Actuate the pump until the adjusting screw (Figure 17) is accessible.
3. Turn the screw clockwise to increase the output and counterclockwise to decrease it.

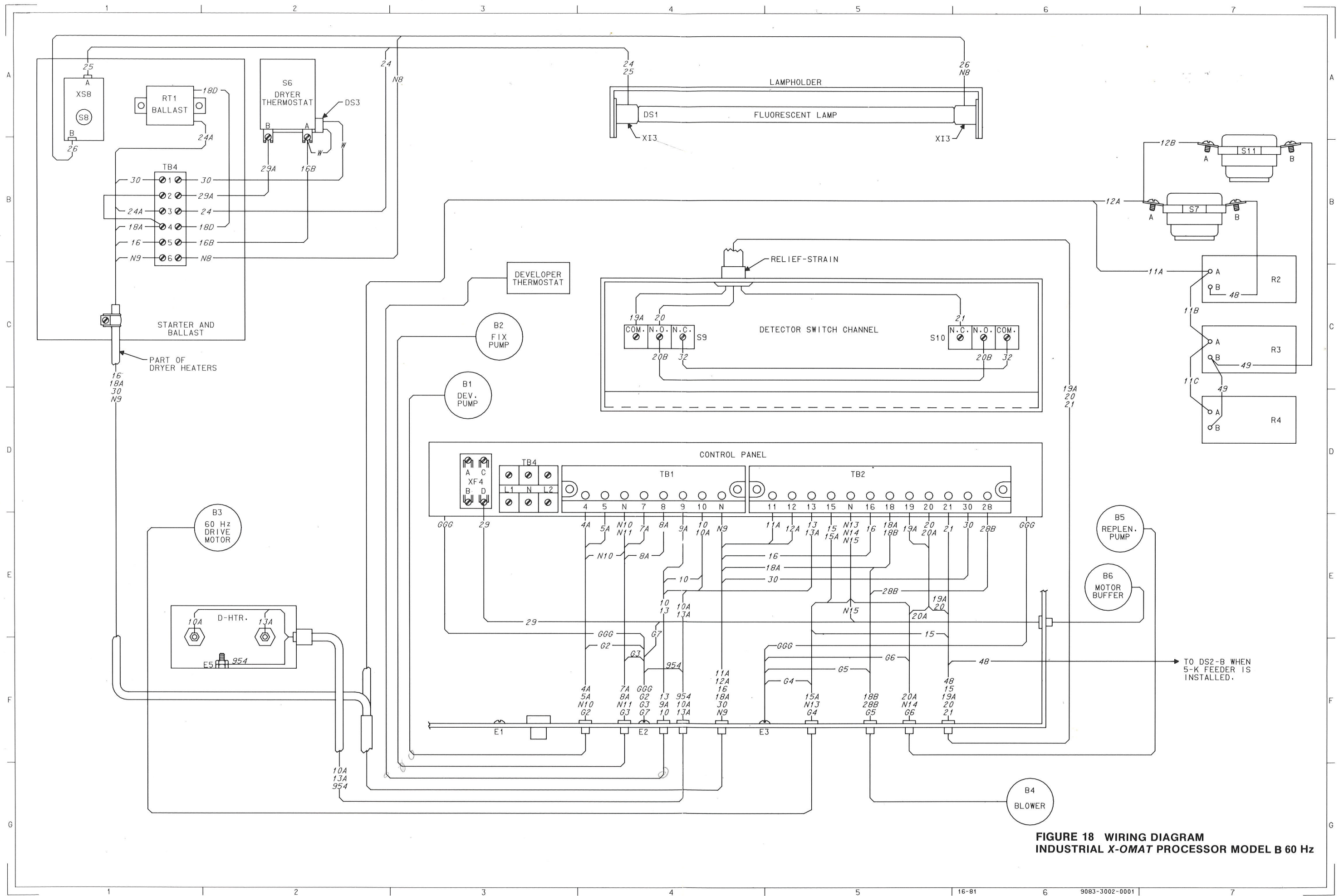
**CAUTION**

Do not hold the locknut on the other end of the adjusting screw.

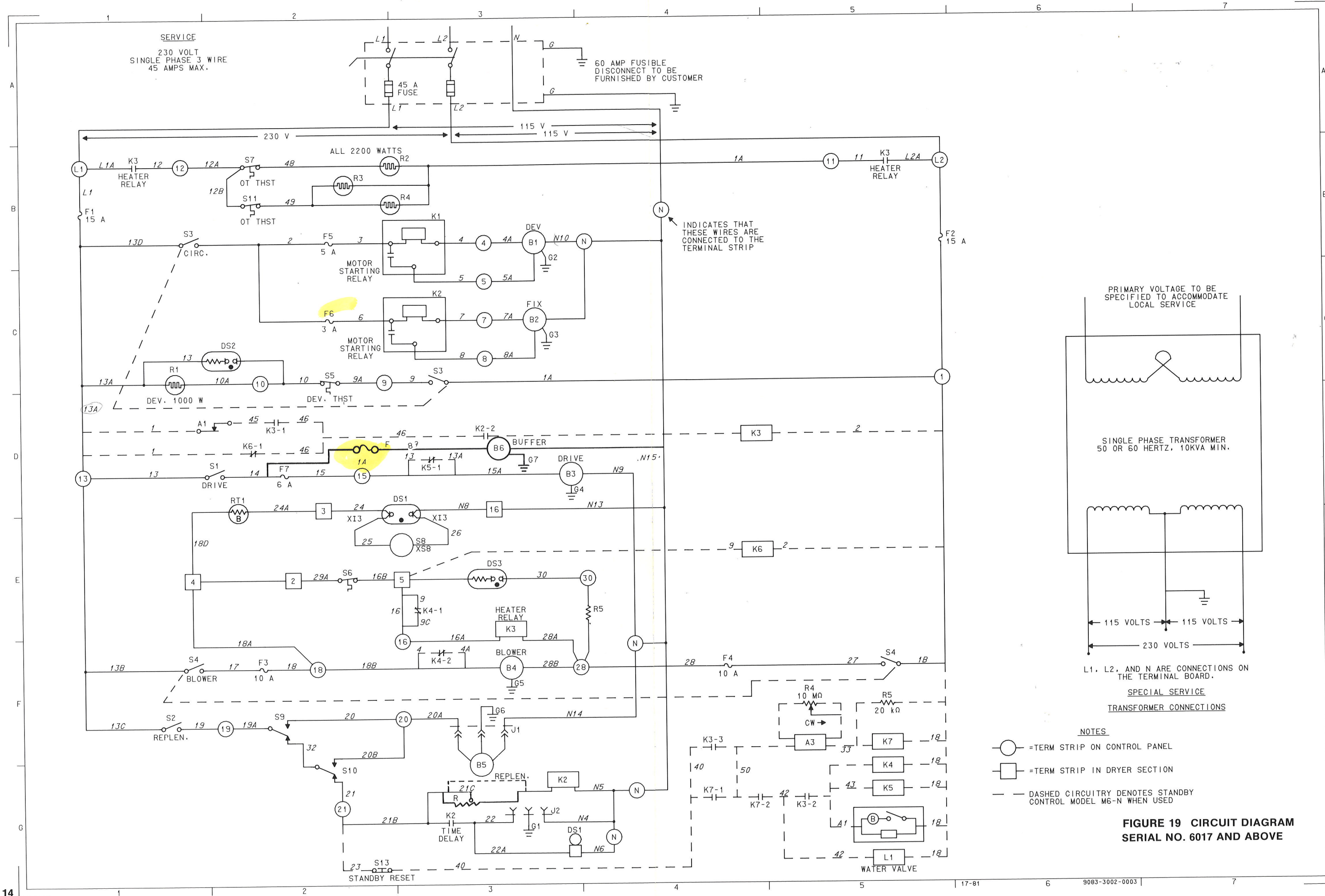


**FIGURE 17**





**FIGURE 18 WIRING DIAGRAM  
INDUSTRIAL X-OMAT PROCESSOR MODEL B 60 Hz**



PRIMARY VOLTAGE TO BE SPECIFIED TO ACCOMMODATE LOCAL SERVICE

SINGLE PHASE TRANSFORMER  
50 OR 60 HERTZ, 10KVA MIN.



L1, L2, AND N ARE CONNECTIONS ON THE TERMINAL BOARD.

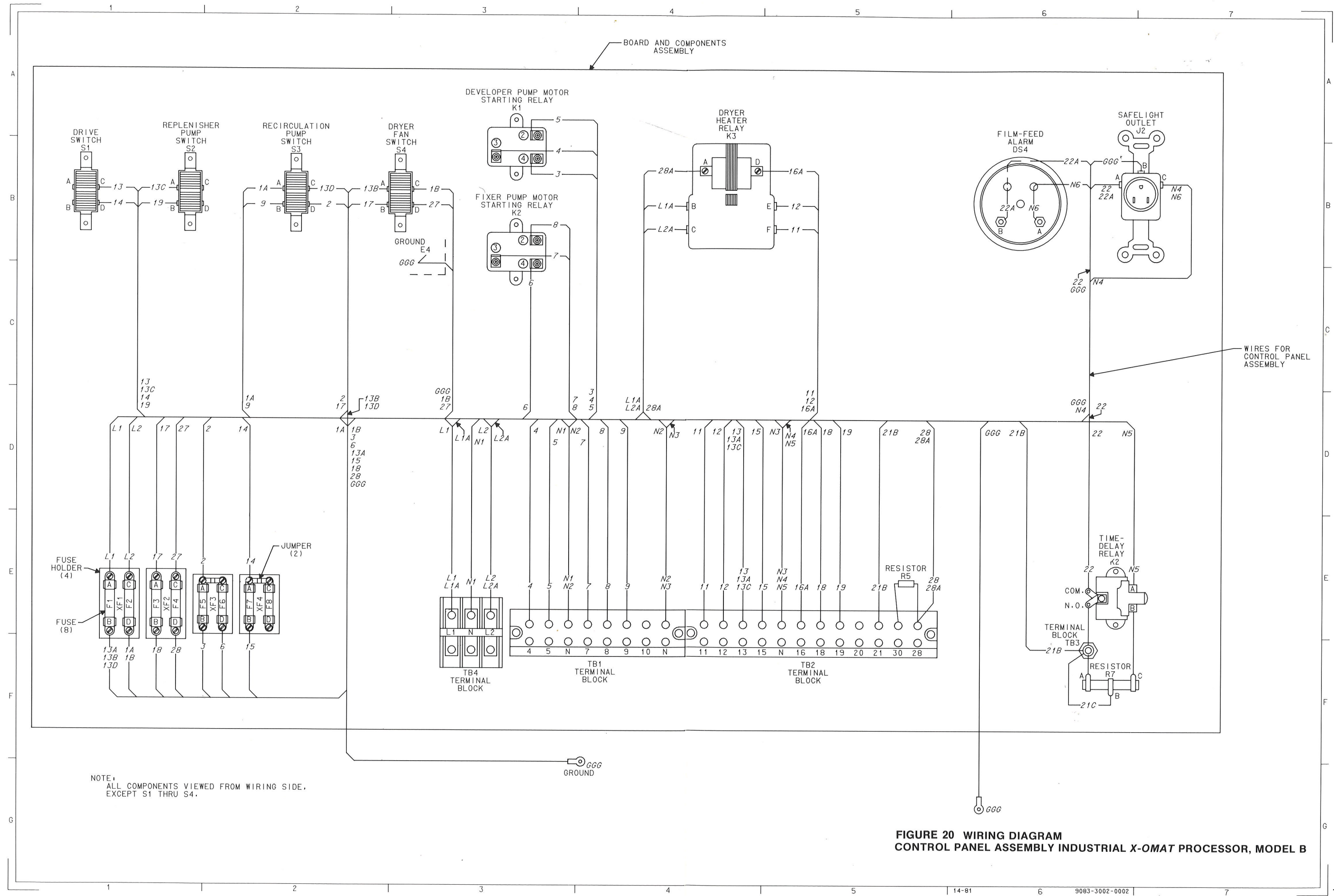
SPECIAL SERVICE  
TRANSFORMER CONNECTIONS

NOTES

- = TERM STRIP ON CONTROL PANEL
- = TERM STRIP IN DRYER SECTION
- - - DASHED CIRCUITRY DENOTES STANDBY CONTROL MODEL M6-N WHEN USED

FIGURE 19 CIRCUIT DIAGRAM  
SERIAL NO. 6017 AND ABOVE





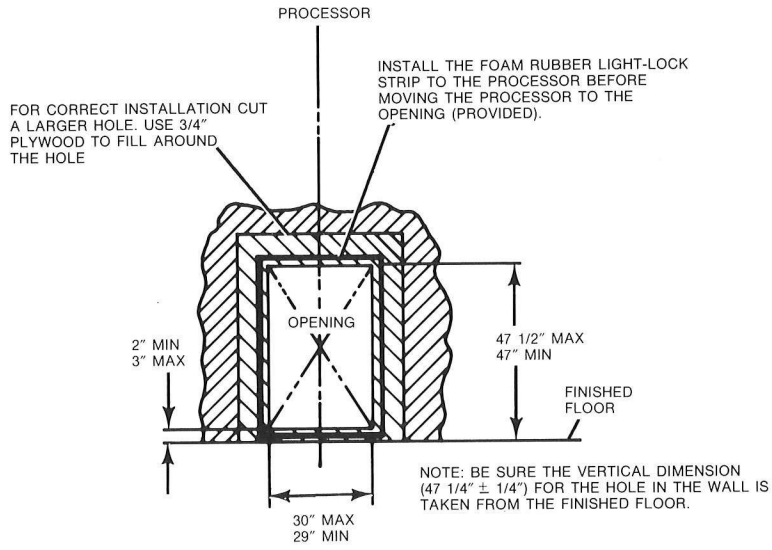
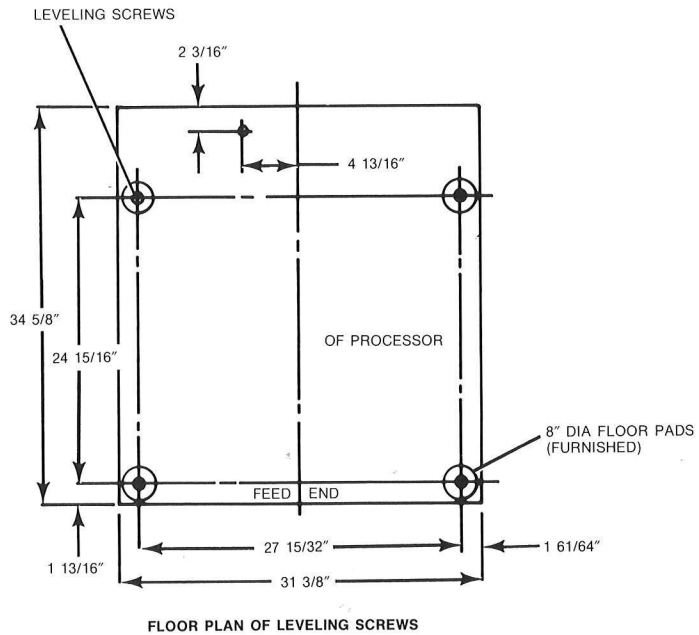


FIGURE 21 SITE SPECIFICATIONS



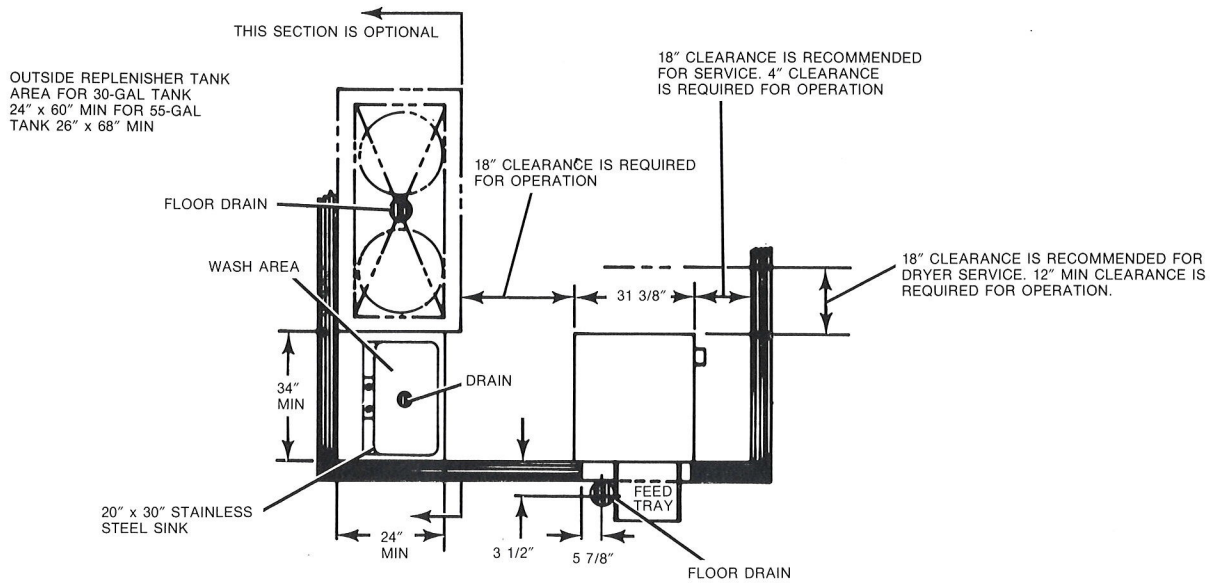
METRIC CONVERSION DATA	
1 in.	= 25.4 mm
1 gal.	= 3.785 L

FIGURE 22 SITE SPECIFICATIONS

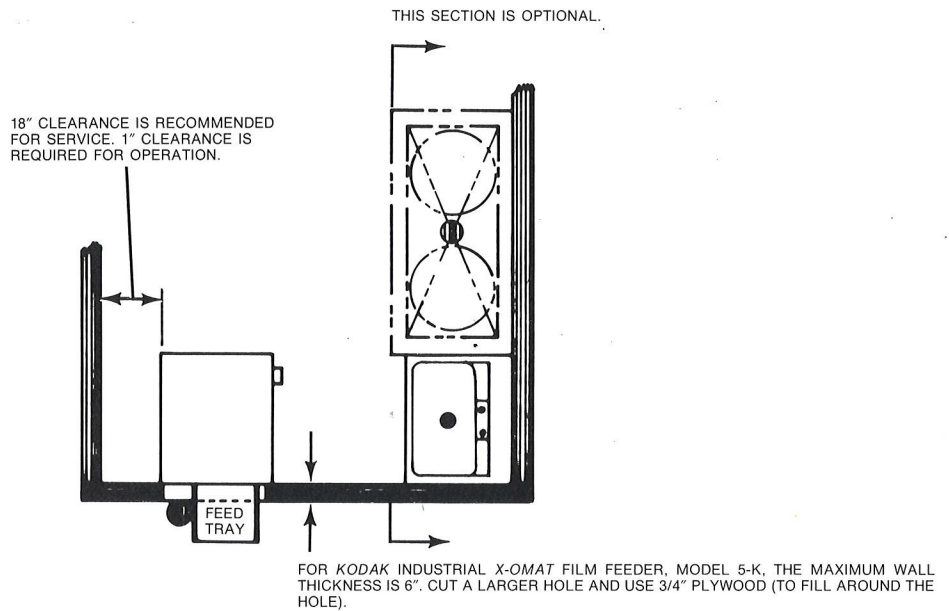


**IMPORTANT**

Allow the recommended clearances or provide an area in an adjacent wall for service to the processor.



**FIGURE 23 SITE SPECIFICATIONS**



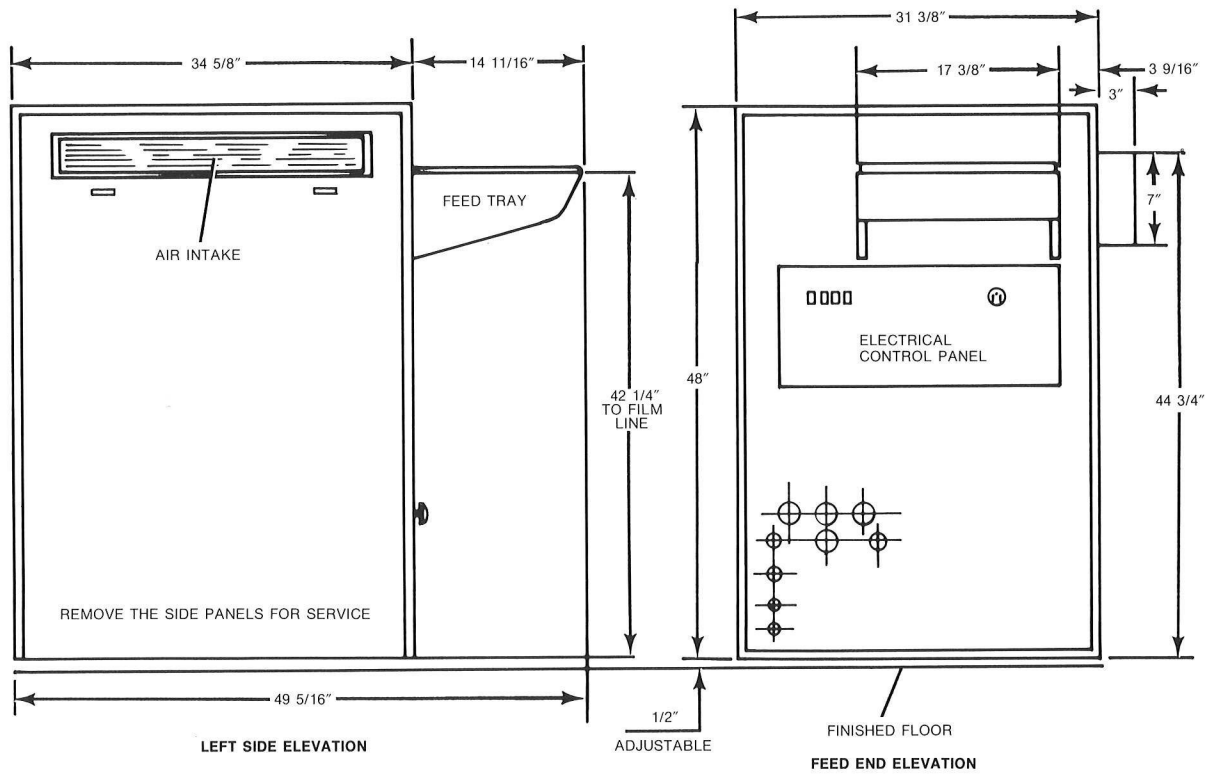
METRIC CONVERSION DATA	
1 in.	= 25.4 mm
1 gal.	= 3.785 L

**OPTIONAL INSTALLATION**  
(FOR DIMENSIONS REFER TO THE STANDARD INSTALLATION)

**CAUTION**

Do not make a solid connection.  
Do not use brass or copper drain lines.

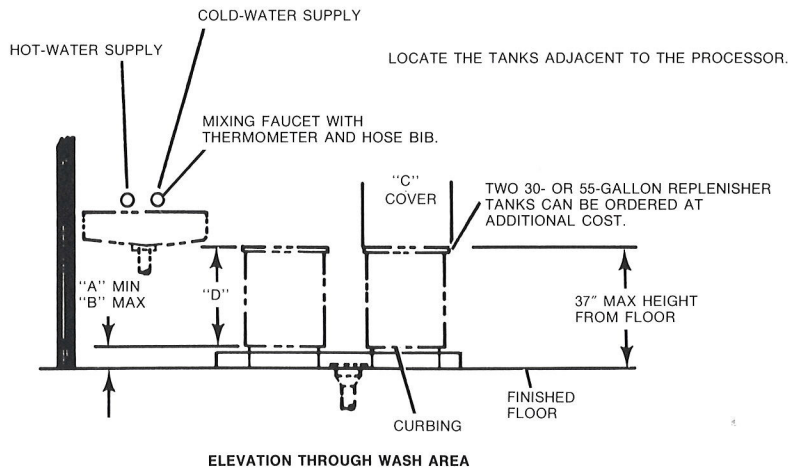
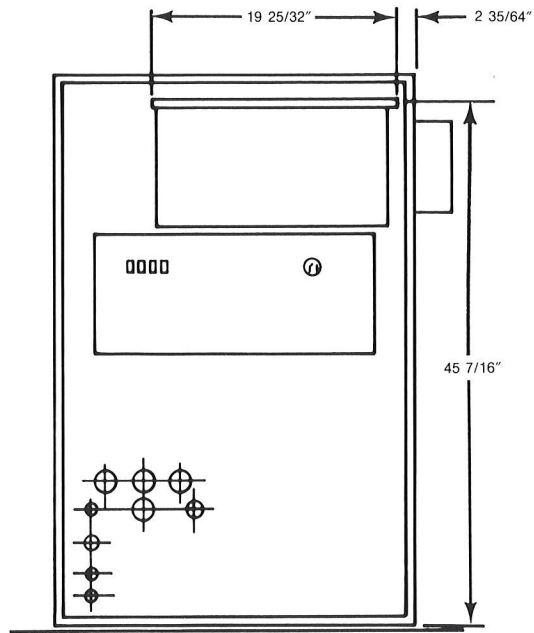
**FIGURE 24 SITE SPECIFICATIONS**



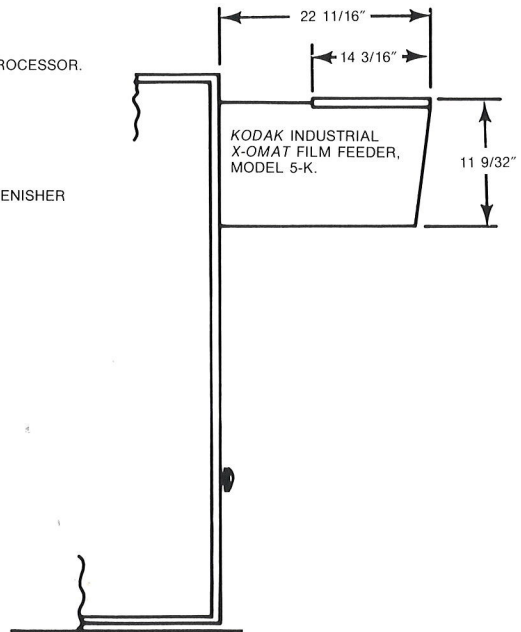
METRIC CONVERSION DATA	
1 in.	= 25.4 mm
1 gal.	= 3.785 L

FIGURE 25 SITE SPECIFICATIONS





ELEVATION SHOWING KODAK INDUSTRIAL X-OMAT FILM FEEDER, MODEL 5-K INSTALLED



**CAUTION**

Do not make a solid connection.  
Do not use brass or copper drain lines.

METRIC CONVERSION DATA  
1 in. = 25.4 mm  
1 gal. = 3.785 L

FIGURE 26 SITE SPECIFICATIONS

## SERVICE REQUIREMENTS

### IMPORTANT

When installing plumbing and electrical service, use local codes.

ELECTRICAL:	115/230 V, 3-WIRE 60 Hz, 45 A MAX. SPECIAL ORDER 115/230 V, 3-WIRE, 50 Hz, 45 A MAX.
WATER:	CONTROLLED WITHIN PROCESSOR TO 3 1/2 gal/min. TEMPERATURE CONTROLLED TO 73 ± 1°F (23 ± 0.6°C) BY MIXING VALVE; PRESSURES OF BOTH HOT- AND COLD-WATER SERVICE TO MIXING VALVE SHOULD BE 45 psi MINIMUM AND EQUAL. INCOMING COLD WATER EXCEEDING 73 ± 1°F (23 ± 0.6°C) SHOULD BE REFRIGERATED.
AIR EXHAUST:	200 ft <sup>3</sup> /min AT 150°F (65.5°C) FULL CAPACITY. 5-10-FT RUN, 2 ELBOWS, 3-IN. DUCT REQD. 10-25-FT RUN, 3-4 ELBOWS, 4-IN. DUCT REQD.
DRAINAGE:	3 1/2 gal/min NORMAL; 8 gal/min WHEN DRAINING TANKS.
AIR MAKE-UP:	200 ft <sup>3</sup> /min TO LIGHTED-ROOM AREA.

### GENERAL INFORMATION

WEIGHT:	APPROX 888 lb WITH PROCESSING TANKS FILLED WITH SOLUTION.
PACKAGING:	THE COMPLETE PROCESSOR IS CONTAINED IN A SINGLE CASE, WEIGHING APPROX 800 lb AND MEASURING APPROX 5'0" LONG, 3'0" WIDE, AND 5'0" HIGH.
PASSAGE:	UNCRATED, THE PROCESSOR WILL PASS THRU A 2'8" WIDE x 4'1" HIGH OPENING.
AIR CONDITIONING MAKE-UP:	200 ft <sup>3</sup> /min AIR MAKEUP TO LIGHTED ROOM AREA. EXHAUST MOISTURE GAIN (FULL LOAD) 370 GRAINS PER MINUTE OR 29 GRAINS PER lb OF AIR. PROCESSOR RADIATION TO LIGHTED ROOM (NORMAL LOAD) 6500 Btu PER HOUR.
ACCESSORIES:	KODAK INDUSTRIAL X-OMAT FILM FEEDER, MODEL 5-K KODAK MANUAL RACK CRANE, MODEL 1 *IF 115/230 V, 3-WIRE SERVICE IS UNAVAILABLE A SINGLE-PHASE TRANSFORMER, 10 kVa IS REQUIRED. PRIMARY TO OPERATE ON LOCAL CURRENT, SECONDARY TO BE 230 V. 115 V BETWEEN CENTER TAP AND BOTH LEGS.

METRIC CONVERSION DATA  
1 in. = 25.4 mm  
1 gal. = 3.785 L

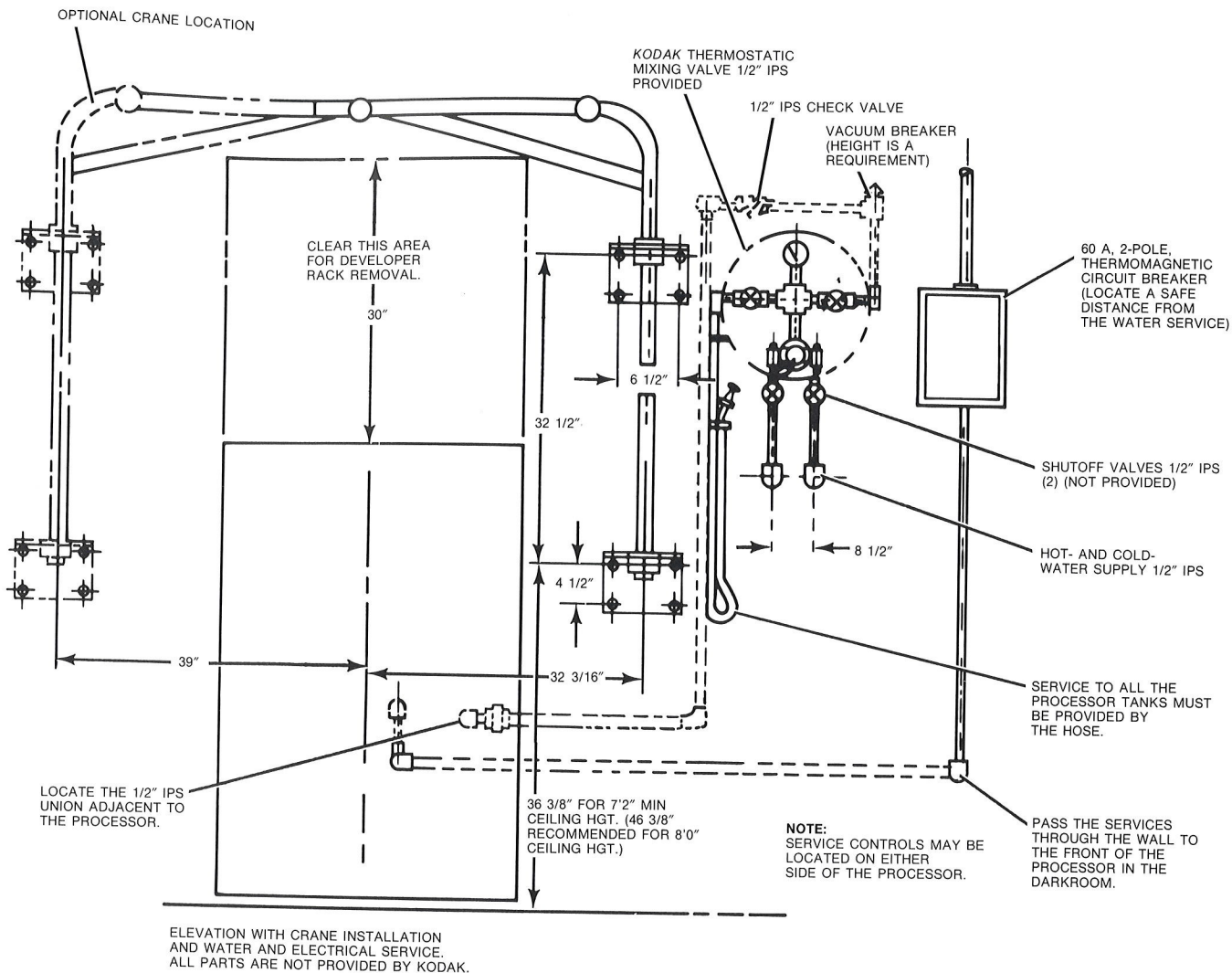
### CAUTION

Do not make a solid connection.  
Do not use brass or copper drain lines.



**IMPORTANT**

When installing plumbing and electrical service, use local codes.



**RACK CRANE (OPTIONAL ACCESSORY)**

DIMENSIONS FOR THE CRANE INSTALLATION, ALLOW 1 3/4" MIN CLEARANCE FOR RACK OVER PROCESSOR.

**WEIGHTS:**

CRANE WEIGHT APPROXIMATELY 38 LB  
RACK WEIGHT APPROXIMATELY 51 LB

OPERATE AT A MAXIMUM OF 44" FROM THE WALL. (5/16 DIA. BOLTS AND RACK UP WASHERS NOT PROVIDED)

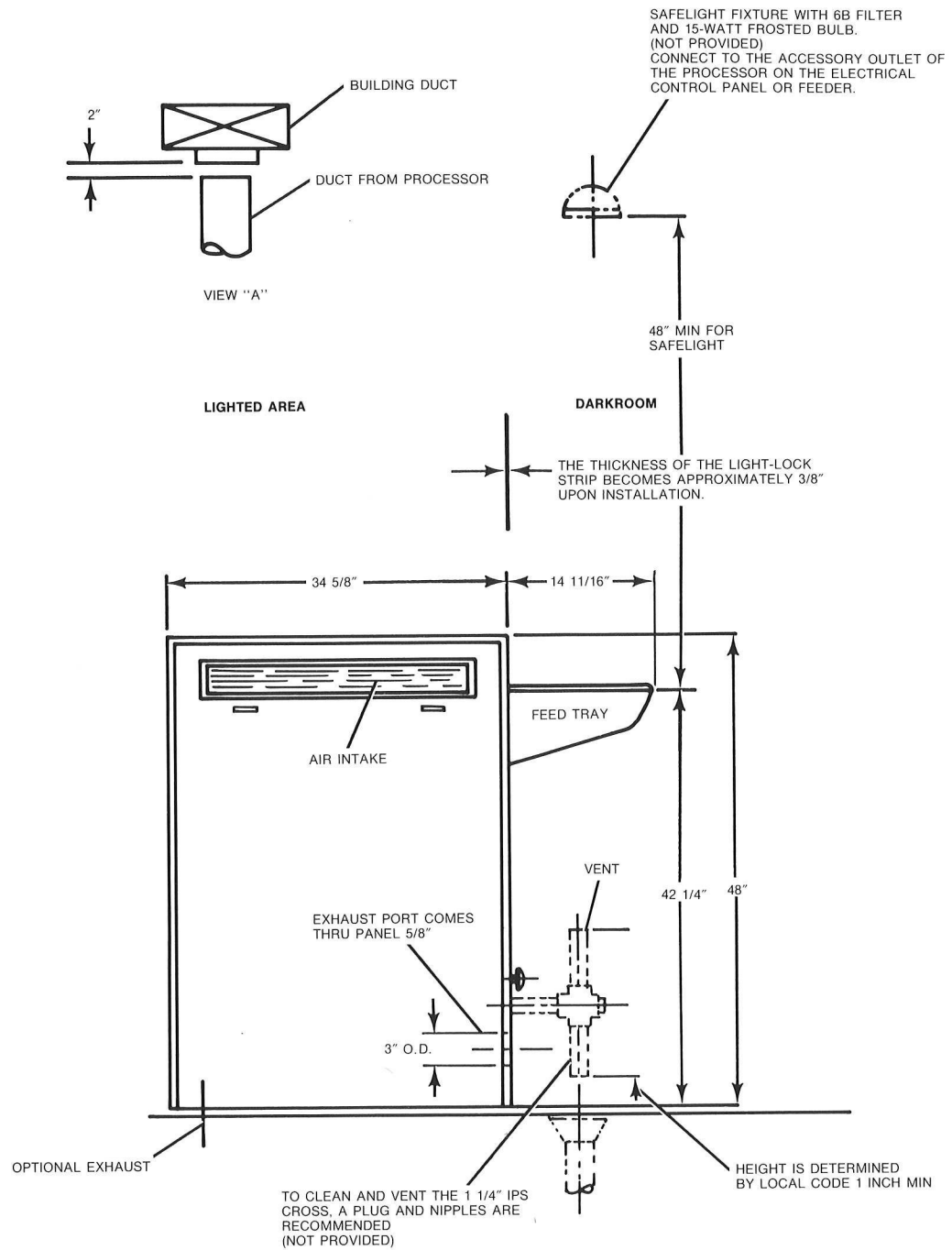
MINIMUM CEILING HEIGHT 7'2".

METRIC CONVERSION DATA  
1 in. = 25.4 mm  
1 gal. = 3.785 L

**CAUTION**

Do not make a solid connection.  
Do not use brass or copper drain lines.

FIGURE 27 SERVICE REQUIREMENTS



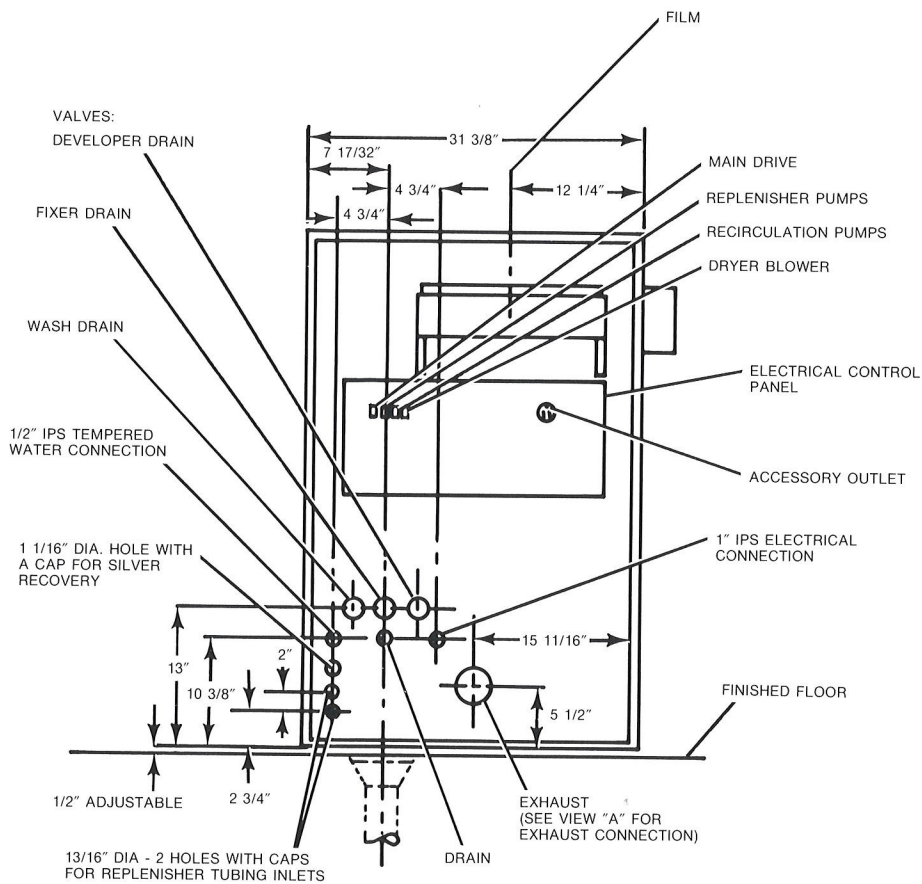
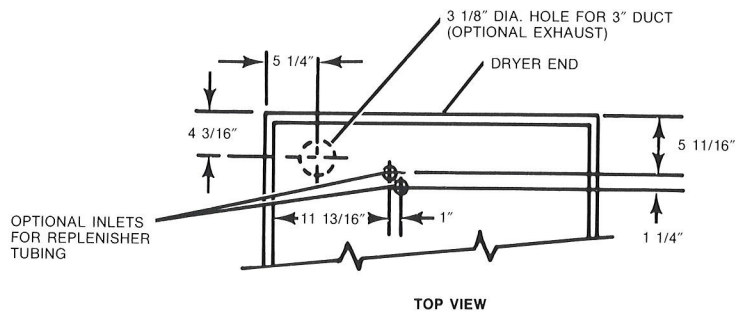
**CAUTION**

Do not make a solid connection.  
Do not use brass or copper drain lines.

METRIC CONVERSION DATA	
1 in.	= 25.4 mm
1 gal.	= 3.785 L

FIGURE 28 SERVICE REQUIREMENTS





METRIC CONVERSION DATA  
 1 in. = 25.4 mm  
 1 gal. = 3.785 L

**CAUTION**

Do not make a solid connection.  
 Do not use brass or copper drain lines.

FIGURE 29 SERVICE REQUIREMENTS

**NEW EQUIPMENT WARRANTY  
KODAK Industrial X-OMAT Processor,  
Model B**

KODAK WARRANTS THIS KODAK INDUSTRIAL X-OMAT PROCESSOR, MODEL B, TO FUNCTION PROPERLY FOR SIX MONTHS FROM THE DATE OF INITIAL INSTALLATION WHEN INSTALLED IN NEW CONDITION. **KODAK MAKES NO OTHER WARRANTIES, EXPRESS, IMPLIED, OR OF MERCHANTABILITY, FOR THIS EQUIPMENT.**

IF THIS EQUIPMENT DOES NOT FUNCTION PROPERLY DURING THE WARRANTY PERIOD, THE DEALER IN KODAK X-OMAT PROCESSORS WHO SOLD THE EQUIPMENT WILL PROVIDE OR ARRANGE FOR REPAIR OF THE EQUIPMENT, WITHOUT CHARGE, ACCORDING TO THE TERMS STATED BELOW.

**REPAIR WITHOUT CHARGE IS KODAK'S AND THE DEALER'S ONLY OBLIGATION UNDER THIS WARRANTY. KODAK WILL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM THE SALE, USE, OR IMPROPER FUNCTIONING OF THIS EQUIPMENT, EVEN IF LOSS OR DAMAGE IS CAUSED BY THE NEGLIGENCE OR OTHER FAULT OF KODAK.**

The following equipment services are available, on your premises, without charge, in the contiguous United States, the Island of Oahu in Hawaii, and certain areas of Alaska.

1. *Repair Service:* Upon request, the equipment will be repaired during normal working hours of the dealer performing the warranty service.

2. *Parts Replacement:* Replacement parts installed during a warranty repair service call will be provided at no charge. In those areas of Alaska and Hawaii where no-charge on-premises warranty service is not available, parts may be returned to Kodak for repair or replacement. Transportation and packing costs are to be paid by the customer.

You will be charged for parts and labor if the need for equipment service or parts is caused by: failure to follow Kodak's care, cleaning, maintenance, and operating instructions; misuse or circumstances beyond Kodak's control; or relocation of the equipment. There will be a charge for lamps and any items which are identified in the equipment instructions as supply items as well as for the repair labor to replace lamps and supply items.

There will also be a charge to provide service or parts to correct problems that have resulted from work by other than a Kodak or dealer-authorized service representative, or to correct problems that have resulted from materials used, or operations performed that are contrary to Kodak's instructions. This warranty does not include service or parts for any attachments, accessories, or alterations not marketed by Kodak, nor to correct problems resulting from their use.

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Health Sciences Markets Division  
EASTMAN KODAK COMPANY • ROCHESTER, N.Y. 14650

