



HEALTH IMAGING

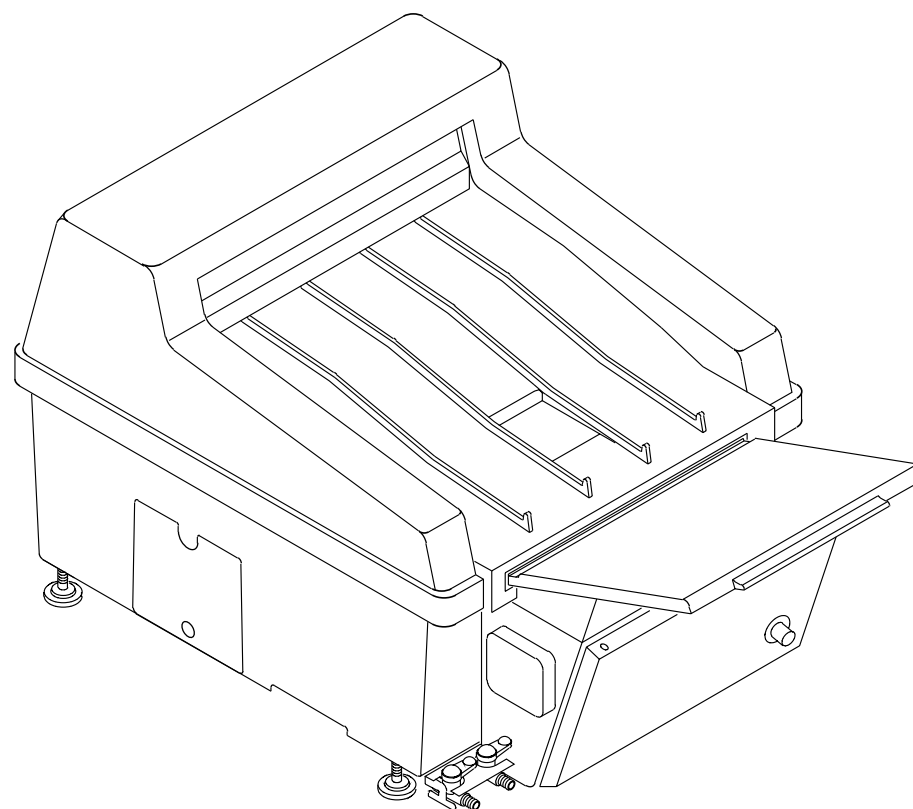
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SITE SPECIFICATIONS for the *Kodak X-Omat 1000, 1000A, and 1000J* **PROCESSORS**



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Warning

To avoid hazardous conditions, keep floors and floor coverings around your *Kodak X-Omat* Processor and associated drains clean and dry at all times. Any accumulation of fluids from mixing tanks, drain lines, etc, should be cleaned up immediately. In the event of an accumulation of liquid due to backup, overflow, or other malfunctions of the drain associated with your *X-Omat* Processor, call a plumber or other contractor to correct any problem with the drain. Kodak accepts no responsibility or liability whatsoever for the serviceability of any drain connected to or associated with a *Kodak X-Omat* Processor. Such drains are the sole responsibility of the customer.

Certification

The following Agencies have reviewed the Processor:		The Processor meets the following EMI limits:
UL	listed to Standard No. 122	FCC Part 15, Class A Limits
CUL	certified to Standard C22.2, No. 950-M89	C108.8-M1983 of Canada, Class A Limits
FDA	FDA 21 CFR 820.30	Directive 87/308/EEC and EN 5502 of the ECC
CE	licensed to EN60601-1 and EN60601-1-1	EN60601-1-2
IEC	IEC 601	IEC1000-4-2, -3, -4, -5
		EN55011
		ICES-003
		VCCI Class 1
		AS/NZS 2064-1/2

Checklist

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Radio Interference



Caution

This equipment generates, uses, and can radiate radio-frequency energy. If the equipment is not installed and used according to the instructions, it may cause interference to radio communications. The equipment has been tested and found to comply with the limits for a *Class A* computing device pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at the user's own expense will be required to take whatever measures may be required to correct the interference.

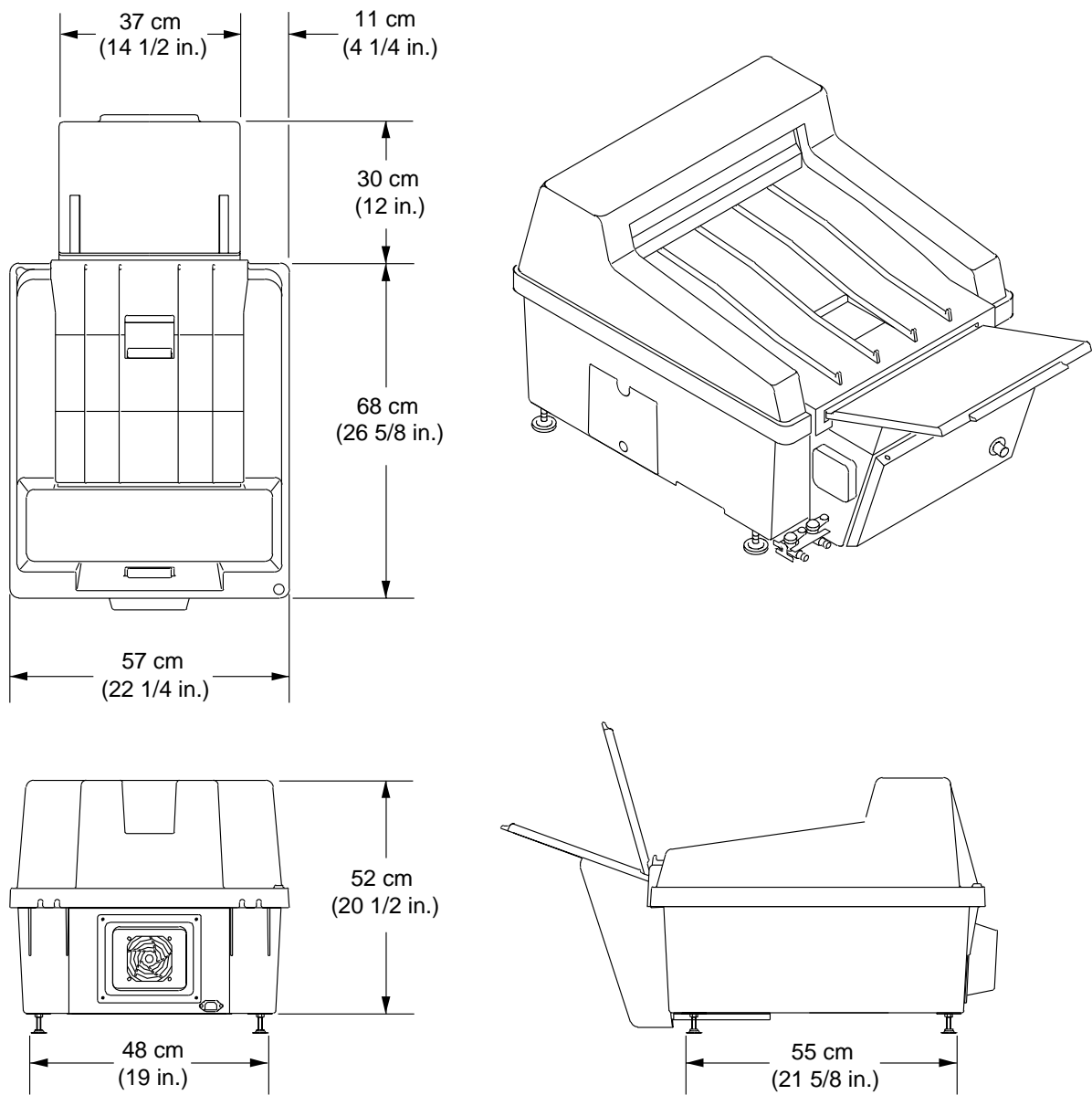
This digital apparatus does not exceed the *Class A* limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

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Section 1: Architectural

Specifications



H164_0029DC

Specifications of the Shipping Crate and Processor			Weight of the Processor	
Package	Dimensions	Weight	With Solution	Without Solution
1 of 2	92 x 69 x 65 cm (36 x 27 x 23 in.)	38.5 kg (85 lb)	62 kg(136.7 lb)	51 kg(112.4 lb)
2 of 2	84 x 69 x 41 cm (33 x 27 x 16 in.)	27.2 kg (60 lb)		

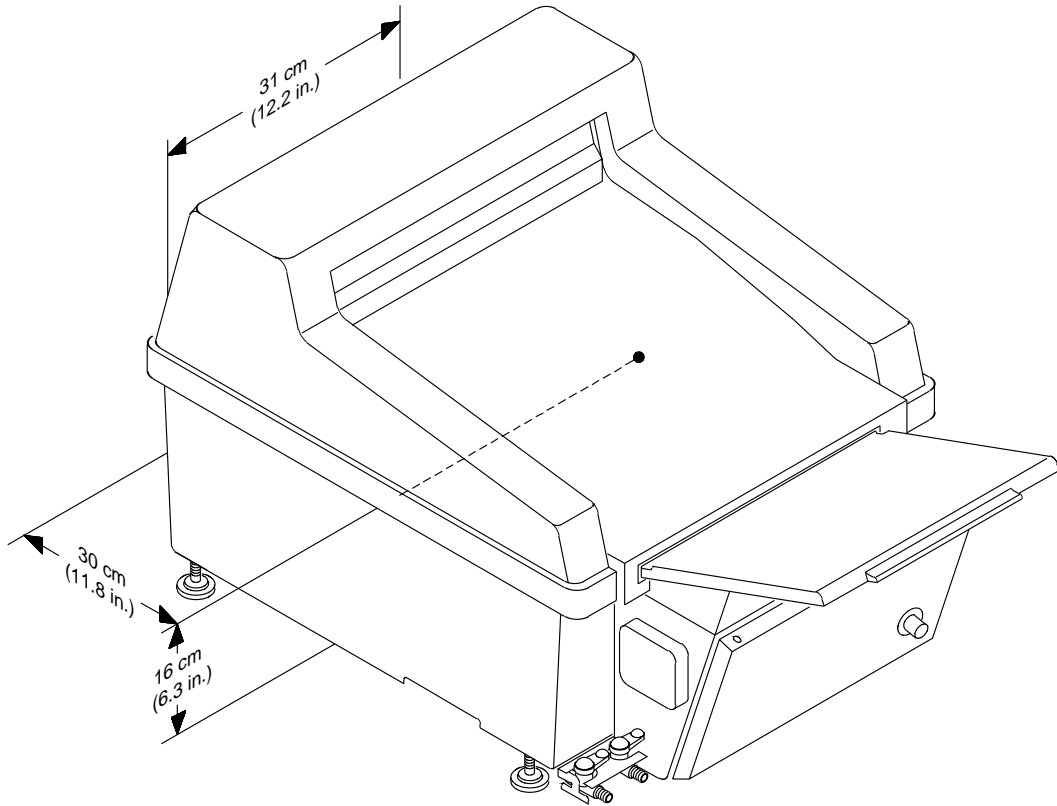
Processor Stand

Use a rigid stand that can support a minimum of 125 kg (275 lb).

Leveling Feet

Leveling feet are provided on the Processor.

Center of Gravity



H164_0046HC

Seismic Mounting Kit

This Processor will accept *Kodak* Seismic Kit Part Number 261413 to secure the leveling feet to a rigid surface, and/or to secure a stand to the floor.

For maximum Processor stability, secure the Processor to a stand. Level the stand and fasten it to the floor. Observe all local codes.

Access and Ceiling Requirements

Maintenance and Operation Access Requirements	
Description	Recommended Minimum Distances
Drive side of Processor	91 cm (36 in.)
Nondrive side of Processor	91 cm (36 in.)
Dryer end of Processor	91 cm (36 in.)
Feed end of Processor	91 cm (36 in.)
Above the Processor	91 cm (36 in.)



Important

If these access requirements are not provided, service time and cost may increase.

Ambient Lighting

Room lighting should not exceed 450 lux (150 ft-candles) at the Processor. The room must be capable of going completely dark when loading film into the Processor.

Location

The Processor must be located a minimum of 1.5 m (5 ft) from any patient areas.

Noise Emission Information

Operator position full system operating mode:

- Sound Pressure Level 54 dB(A) L_A ⁽¹⁾
- Instantaneous Peak Values ≥ 130 dB(C) None



Sound Power Level 65 dB(A) ⁽²⁾

⁽¹⁾ Measured in accordance with DIN 45635 in a Hemi-Anechoic chamber

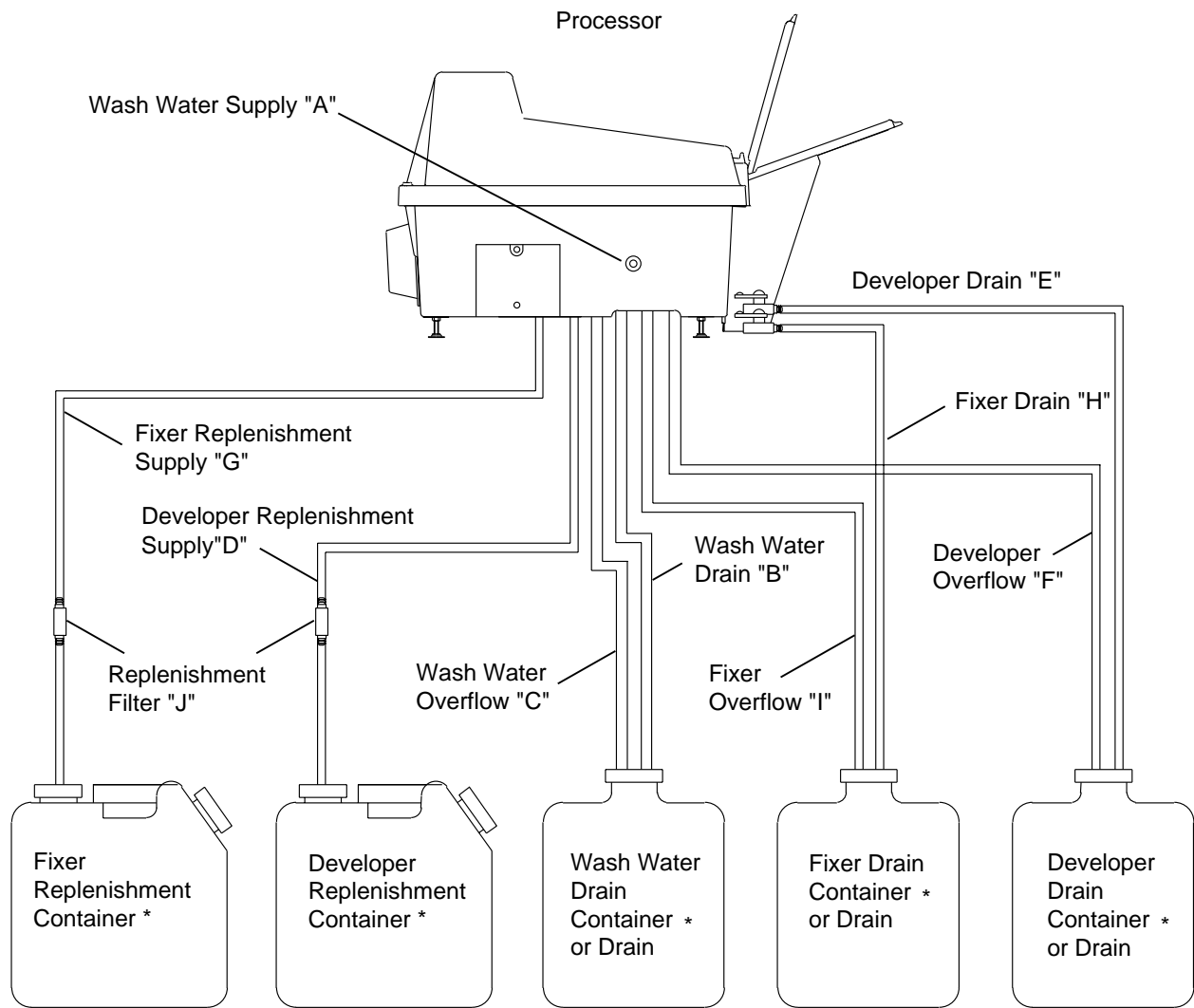
⁽²⁾ Not required when the Sound Pressure Level L_A is < 85 dB(A)

Section 2: Plumbing

Specifications

Subject	Requirements	
Codes	 Warning All plumbing requirements must comply with local and national codes. Iron piping is <u>not</u> recommended.	
Drain or Drain Containers	 Warning All drain material must be made of chemically resistant, non-corrosive material. Use PVC or the equivalent. The Drain must have a minimum diameter of 7.6 cm (3 in.) and no obstructions.	
	Minimum diameter	7.6 cm (3 in.)
	Capacity	1 L/min (1/4 gal/min) during normal operation 2.85 L/min (3/4 gal/min) for draining all 3 solutions together 0.95 L/min (1/4 gal/min) if each solution is drained separately
	Distance from the Processor	1.5 m (60 in.) maximum
	Height from the floor	Top of the Drain or Drain Containers must be lower than the bottom of the Processor.
	Hoses	Drain and Overflow Hoses are packed with the Processor. See Page 9.
	Drain	Do not make solid connections between the Hoses and the Drain or Drain Containers. Use corrosive resistant connections.
Water Supply	Location	Accessible to both the Processor and the Replenishment Tanks
	Processor Input	25mm (1 in.) NPT Male connection on the Nondrive side of the Processor
	Temperature	4 - 30C (40 - 85F) <ul style="list-style-type: none"> If the temperature of the water supply is higher than 30C (85F), install a water chiller. A tempered water supply is suggested for cleaning the Processor, and for mixing chemicals manually.
	Pressure	140 - 620 kPa (20 - 90 psi) <ul style="list-style-type: none"> If necessary, install a Pressure Regulator and Gauge.
	Flow volume	Maximum 1.25 L/min (1/3 gal/min)
	Filtration	50-micron Water Filter is recommended in the input water line
	Check Valve or Vacuum Breaker	The Processor has an internal 20 mm (0.8 in.) water gap in the wash supply system. A Check Valve should not be necessary, unless local codes require one.
Altitude	Maximum altitude 2400 m (8000 ft) above sea level	

Plumbing and Drain Connections



* Containers not Supplied

H164_0030DC

Parts supplied with the Processor

Part No.	Item	Description	Quantity
1C7932	J	Replenishment Filter	2
1C7935	K	External Replenishment Tank - 10 L (2.6 gal)	2
1C7936		Pitcher	1

Hoses supplied with the Processor

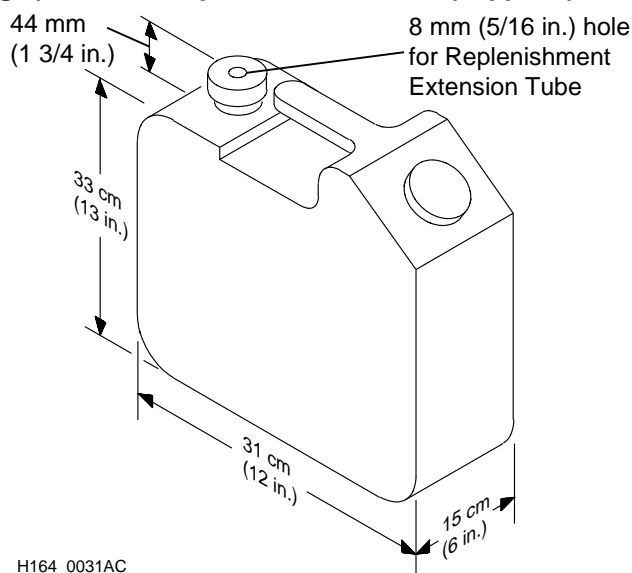
Function		Item	Color	O.D.	I.D.	Length*
Wash Water	Supply	A	Customer supplies hose/fitting to connect to 25mm (1 in.) NPT Male fitting			
	Drain	B	Clear/White Band	16 mm ($\frac{5}{8}$ in.)	10 mm ($\frac{3}{8}$ in.)	70 cm (27 in.)
	Overflow	C	Clear/White Band	22 mm ($\frac{7}{8}$ in.)	16 mm ($\frac{5}{8}$ in.)	70 cm (27 in.)
Developer Replenishment	Supply	D	Clear/Red Band	13 mm ($\frac{1}{2}$ in.)	6 mm ($\frac{1}{4}$ in.)	130 cm (51 in.)
	Drain	E	Clear/Red Band	16 mm ($\frac{5}{8}$ in.)	10 mm ($\frac{3}{8}$ in.)	70 cm (27 in.)
	Overflow	F	Clear/Red Band	16 mm ($\frac{5}{8}$ in.)	10 mm ($\frac{3}{8}$ in.)	70 cm (27 in.)
Fixer Replenishment	Supply	G	Clear/Blue Band	13 mm ($\frac{1}{2}$ in.)	6 mm ($\frac{1}{4}$ in.)	130 cm (51 in.)
	Drain	H	Clear/Blue Band	16 mm ($\frac{5}{8}$ in.)	10 mm ($\frac{3}{8}$ in.)	70 cm (27 in.)
	Overflow	I	Clear/Blue Band	16 mm ($\frac{5}{8}$ in.)	10 mm ($\frac{3}{8}$ in.)	70 cm (27 in.)

* Usable length of Hose outside of the Processor
Including the Replenishment Filter and Extension Tube
Shutoff Valve supplied on Developer and Fixer Drains

Parts available if additional hose length is required


Part No.	Item	Description	Quantity	How to obtain the part
760476	D,G	6 mm ($\frac{1}{4}$ in.) ID Hoses for the Replenishment System	Order by the foot.	The customer can obtain these Hoses locally or order them from Kodak.
452990	B,E,F,H,I	10 mm ($\frac{3}{8}$ in.) ID Hoses for the Drains and Overflows		
696442	C	16 mm ($\frac{5}{8}$ in.) ID Hose for the Water Drain		

Dimensions of the 10 L (2.6 gal) External Replenishment Tanks (supplied)



Section 3: Electrical

Specifications

Subject	Requirements					
Basic Service	 Warning Earth ground is required. All electrical service must comply with local and national codes.					
Model	Voltage	Voltage Range	Watts	Hertz	Amps	Service
1000J	100	90 - 110	1200	50/60	12	3 wires:(Line 1, Neutral, Ground)
1000A	120	104 - 132	1300	50/60	12	
1000	220	198 - 242	1600	50/60	7	3 wires:(Line 1, Line 2, Ground)
	230	207 - 253	1600	50/60	7	
	240	209 - 264	1600	50/60	7	

Section 4: Heating, Ventilation, and Air Conditioning

Specifications

Subject	Requirements	
Room	Temperature	15 - 30C (59 - 86F)
	Relative Humidity	15 - 76%
	Ventilation	10 room air exchanges/hr for a room that is 3 x 3 x 3 m (10 x 10 x 10 ft)
	Heat Load to the Room with the Processor	4800 kJ/hr (4500 BTU/hr)



Important

- If the darkroom has 10 room air exchanges per hour, no further ventilation of the Processor is necessary.
- If the darkroom does not have 10 room air exchanges per hour, the Processor must be connected to the building exhaust system for correct venting. See specifications below.

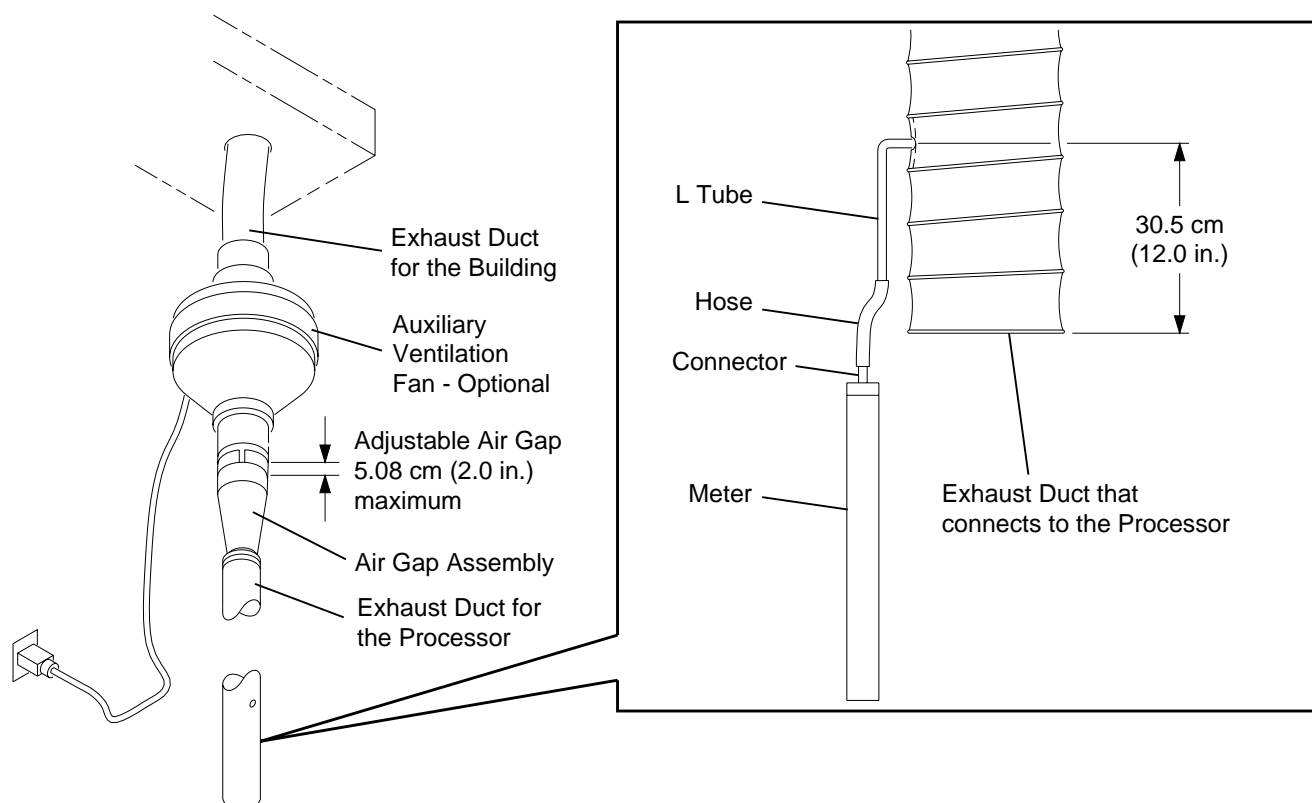
Subject	Requirements		
Building Exhaust System	The system must have the following ratings:		
	Volume - full load	2,100 L/min (75 ft³ /min) maximum, 24 hours per day	
	Temperature	66C (150F) maximum	
	Exhaust Duct from the Processor	Diameter = 7.6 cm (3 in.)	
	Exhaust Duct from the Building with an Adjustable Air Gap	Negative Pressure*	
		7.6 cm (3 in.) Duct	0.76 - 2.54 mm (0.03 - 0.10 in.) of water
		10.2 cm (4 in.) Duct	0.25 - 1.02 mm (0.01 - 0.04 in.) of water
		*See the next page for the procedure for checking the negative pressure. If the negative pressure is not correct, an Auxiliary Ventilation Fan must be installed.	



Important

- Check local codes for venting requirements.
- If the venting is not correct, fumes will corrode the equipment. Do not install the Processor or accessories if the venting is not correct.
- If ventilation is to be connected to the Processor, measure the negative static pressure in the Exhaust Duct by using the following procedure to check that the airflow is correct.
- The airflow is correct when the fumes are flowing out of the Processor through the Exhaust Hose.
- Inform the customer that all Covers and Panels must be installed while the Processor is energized.

Procedure for Checking the Negative Pressure



H150_0112HCB
H150_0112HA

Diameter of the DUCT	Negative Pressure
7.6 cm (3.0 in.)	0.76 - 2.54 mm (0.03 - 0.10 in.) of water
10.2 cm (4.0 in.)	0.25 - 1.02 mm (0.01 - 0.04 in.) of water

- [1] Connect the rubber Hose from the Air Meter TL-2431 to the:
 - L Tube
 - center Connector on the Meter
- [2] Make a 6.4 mm ($\frac{1}{4}$ in.) hole approximately 30.5 cm (12 in.) from the end of the Exhaust Duct that will be connected to the Processor.
- [3] Insert the L Tube into the hole you just made until the end of the Tube is flush with the inside of the Exhaust Duct.
- [4] Check that the negative pressure on the Meter is correct.
 - Do not connect the Exhaust Duct to the Processor.
 - Hold the Meter vertically.
- [5] If necessary, adjust the distance between the Exhaust Duct for the Building and the Exhaust Duct for the Processor until the negative pressure is correct. If you cannot obtain the correct negative pressure, an Auxiliary Ventilation Fan must be installed.
- [6] Remove the L Tube from the Exhaust Duct and seal the remaining hole.

Parts

The *Kodak* Auxiliary Ventilation Fan Kit is available for use with all *Kodak* Processors to aid in meeting site specifications for ventilation. Improperly vented processors may exhibit film artifacts and corrosion of internal metal parts and accessories. Install this Auxiliary Ventilation Fan Kit if ventilation is inadequate or marginal.

Part No.	Description	Quantity	How to obtain the part
*	Exhaust Hose Adaptor for <i>X-Omat</i> 1000, 1000A, 1000J Processors	1	The customer can order these parts from Kodak or obtain equivalent parts locally.
264503	<i>Kodak</i> Auxiliary Ventilation Fan Kit / 110 V Includes: Air Gap Assembly 264519	1	
8B7105	<i>Kodak</i> Auxiliary Ventilation Fan Kit 95-250 V AC, 47-63 Hz Includes: Air Gap Assembly 264519	1	
264519	Air Gap Assembly	1	

* Obtain this part number from your *Kodak* Representative.

Section 5: Appendix A

Related Publications

This publication is part of a series of instruction books that provides technical support information on the *Kodak X-Omat* 1000, 1000A, and 1000J Processors. If you need an additional or replacement publication, order it through your Eastman Kodak Representative using the Publication Part Numbers below.

Publications for <i>Kodak X-Omat</i> 1000, 1000A, and 1000J Processors					
	Operator Manual	Site Specs	Installation Instructions	Service Manual	Diagrams
Publication Part No.	9B8942	7C7880	9B8948	9B8949	7C7875

Publication History

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15JUN98	7C7880	2504-470	All	ss3482_1_15jun98.doc	Editorial Changes

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