

## **Chapter One** P R O D U C T   I N F O R M A T I O N

## Chapter One P R O D U C T I N F O R M A T I O N

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## Printer identification labelling

The printer has a label bearing its model and serial number at its back. This label also contains other safety precautions.

### US/Canada version

**KYOCERA FS-7000**  
120V~ 60Hz 10A  
**KYOCERA CORPORATION**  
MIE PLANT, TAMAKI BLOCK  
704-19 NOJINO, TAMAKI-TOWN  
WATARAI-COUNTY, MIE PREF. JAPAN  
MANUFACTURED

**Tested To Comply  
With FCC Standards**  
FOR HOME OR OFFICE USE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.


This Class B digital apparatus meets all requirements of the Canadian interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.


THIS LASER PRODUCT CONFIRMS TO THE APPLICABLE REQUIREMENTS OF FEDERAL REGULATIONS 21 CFR CHAPTER 1, SUBCHAPTER J.

**CAUTION**  
REMOVE POWER CORD BEFORE SERVICE AND FUSE REPLACEMENT.


**ATTENTION**  
POUR PRÉVENIR LES CHOCS ÉLECTRIQUES, COUPER L'ALIMENTATION AVANT DE REMPLACER LE FUSIBLE.




**MADE IN JAPAN**




LISTED  
8J68  
UL 1950




**PRECAUZIONE**  
PRIMA DI CAMBIARE I FIESIBILI O DI ESEGUIRE RIPARAZIONI, STACCATTE IL CADO DI ALIMENTAZIONE.




### Europe/Asia version




**KYOCERA FS-7000**  
220-240V~ 50 Hz 5A



**KYOCERA CORPORATION**  
MADE IN JAPAN



CLASS 1 LASER PRODUCT TO IEC825  
LASER KLASSE 1 NACH IEC825  
KLASSE 1 LASER PRODUKT I.H. IEC825  
LUOKAN 1 LASERLAITE



**CAUTION**  
REMOVE POWER CORD BEFORE SERVICE AND FUSE REPLACEMENT.

**VORSICHT**  
VOR WARTUNG UND SICHERUNGS-WECHSEL NETZSTECKER ZIEHEN.

**ATTENTION**  
POUR PRÉVENIR LES CHOCS ÉLECTRIQUES, COUPER L'ALIMENTATION AVANT DE REMPLACER LE FUSIBLE.

**ATENCIÓN**  
DESENCHUFE EL CORDÓN DE ALIMENTACIÓN ANTES DEL SERVICIO Y DEL REEMPLAZO DEL FUSIBLE.

**PRECAUZIONE**  
PRIMA DI CAMBIARE I FIESIBILI O DI ESEGUIRE RIPARAZIONI, STACCATTE IL CADO DI ALIMENTAZIONE.

## Printer Specifications

### Engine

Specification	FS-7000
Print method	Electrophotography laser scan
Print speed (when printing multiple copies of the same page)	A4: 28 pages/min., B4: 18 pages/min., A3: 16 pages/min.
Resolution (dpi)	600 horizontal/600 vertical
Smoothing	KIR 2 (2400 horizontal/600 vertical)
First print (A4 or letter, 23°C), depends on input data	10 seconds or less (75 seconds or less with sleep mode on)
Warm-up time at 23°	65 seconds or less
Maximum duty cycle (A4)	100,000 pages/month
Laser diode	Visible laser
Main charger	Scorotron wire
Transferring	Biased roller
Separation	DC
Drum cleaning	Blade
Drum discharging	LED array
Fuser	Heat and pressure
Paper	Plain paper (as specified separately)
Capacity of paper feed tray (80g/m <sup>2</sup> [0.11 mm thickness])	Cassette: 500 sheets, MP tray: 100 sheets
Capacity of output trays (80g/m <sup>2</sup> [0.11 mm thickness])	500 sheets

### Controller

Specification	FS-7000
CPU	PowerPC603e/100 MHz
System ROM size	4 MB, flash DIMM or masked DIMM
Resident font ROM size	4 MB
Option fonts ROM	2 MB (PK-4)
Main RAM	4 MB

Specification		FS-7000
Additional RAM (SIMM)		64MB maximum (72-pin SIMM × 2)
Memory card		SRAM or flush, JEIDA 4.2/PCMCIA 2.1 See <i>Recommended flash cards</i> in this chapter.
Host interface		Parallel: High-speed, bi-directional (IEEE1284), Serial: RS-232C/RS-422A, Option, KCIO (HDD).
Page description language		Prescribe II
Standard emulation modes		HP LaserJet 5Si, IBM Proprinter X24E, Diablo 630, Epson LQ-850

## Weight and dimensions

Specification		FS-7000
Main unit	Width	56 cm (22")
	Height	34.5 cm (13.6")
	Depth	56.6 cm (22.3")
	Weight	41.5 kg (18.7 lb.)
Paper feeder	Width	56 cm (22")
	Height	24.7 cm (9.7")
	Depth	56.6 cm (22.3")
	Weight	19.5 kg (8.8 lb.)

## Power requirements

Specification		FS-7000
Voltage requirements	US/Canada	120V AC ±10%, 60Hz ±2%.
	Europe/Asia	220-240V AC±10%, 50 or 60Hz ±2%
Watts	Maximum	1200 W
	Normal operation	677 W
	Standby	215 W
	Sleeping	34 W

### Environmental requirements

Specification	FS-7000
Operating temperature and humidity	10°C to 32.5°C (50°F to 90.5°F), 20 to 80% RH
Maximum altitude	2,000 m (6,500 feet)
Noise emission (Excluding peaks, measured at 1m from printer, as per ISO7779)	50 dB (A) maximum/38 dB (A) at standby/unmeasurably low at sleeping)

### Recommended flash cards

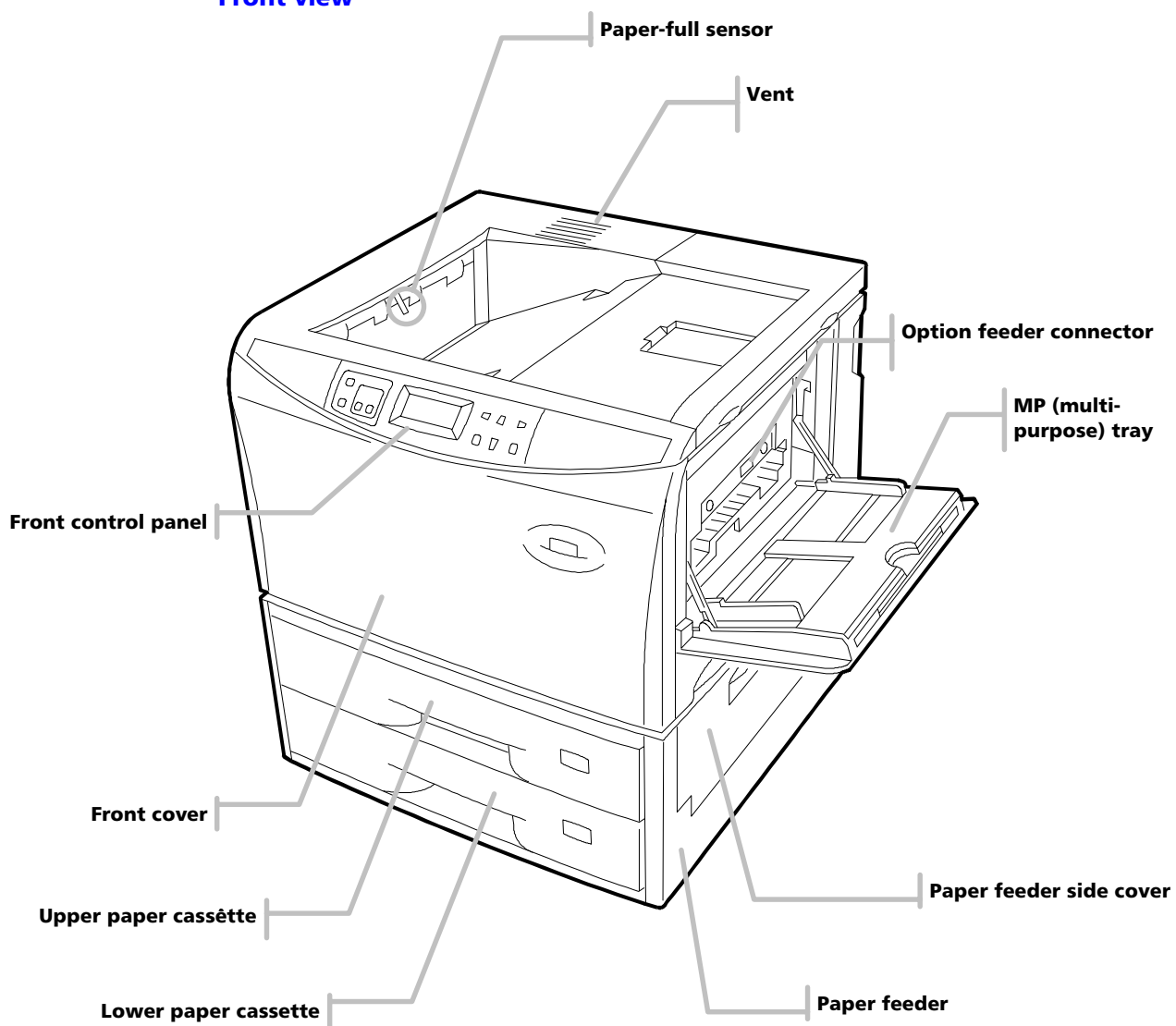
The printer provide support for a JEIDA/PCMCIA category of memory card in both SRAM and flush types of up to 32 MB. Following is a list of makes and models of flush cards recommended for use with the printers.

Note that the flush card to be used should be operable on 5V DC.

	<b>Model</b>	<b>Capacity</b>
<b>AMD</b>	AmC001CFLKA	1MB
	AmC002CFLKA	2MB
	AmC004CFLKA	4MB
	AmC010CFLKA	10MB
	AmC004DFLKA	4MB
	AmC008DFLKA	8MB
	AmC020DFLKA	20MB
<b>Fujitsu</b>	MB98A81063	1 MB
	MB98A81183	2 MB
	MB98A81273	4 MB
	MB98A81373	8 MB
	MB98A81473	16 MB
<b>Panasonic</b>	BN-02MHF4C (CC)	2 MB
	BN-04MHF4C (CC)	4 MB
<b>Centennial</b>	FL01M-20-11114-03	1 MB
	FL02M-20-11114-03	2 MB
	FL04M-20-11114-03	4MB
	FL08M-20-11114-03	8MB
<b>Maxell</b>	EF-2M-TB (DC)	2MB
	EF-4M-TB (DC)	4MB
	EF-8M-TB (DC)	8MB
	EF-16M-TB (DC)	16MB

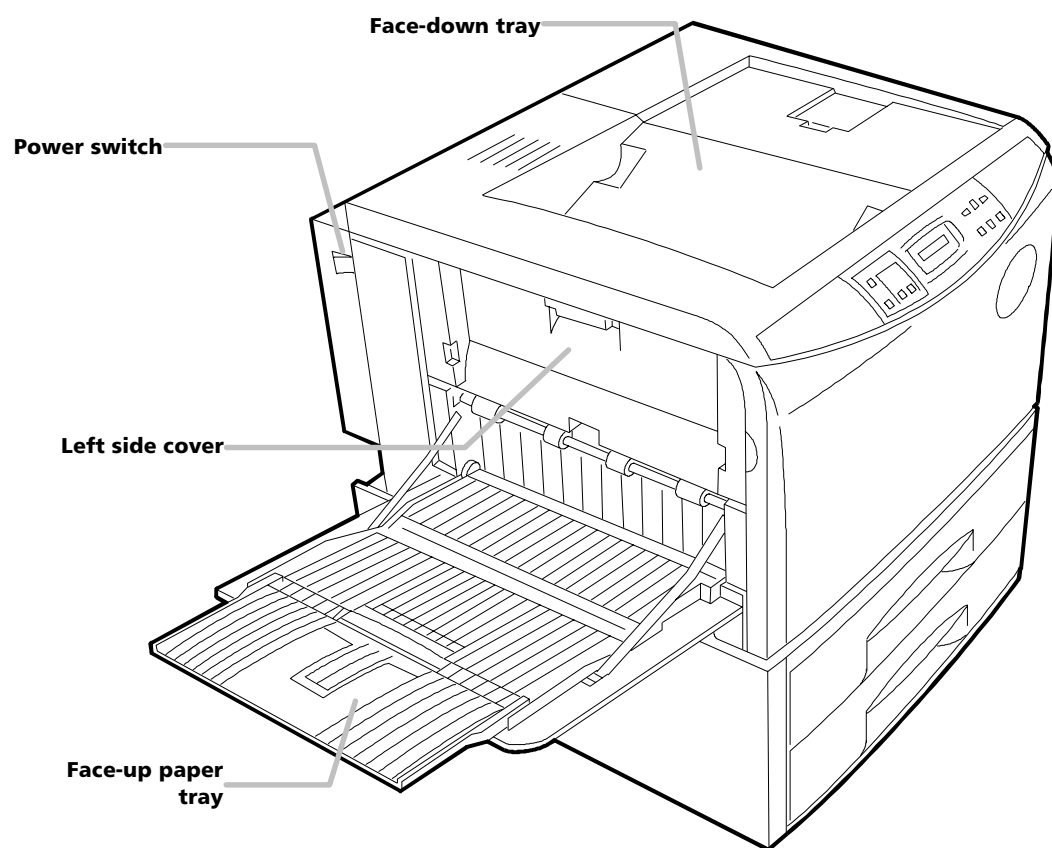
## Front and rear views

### Front view

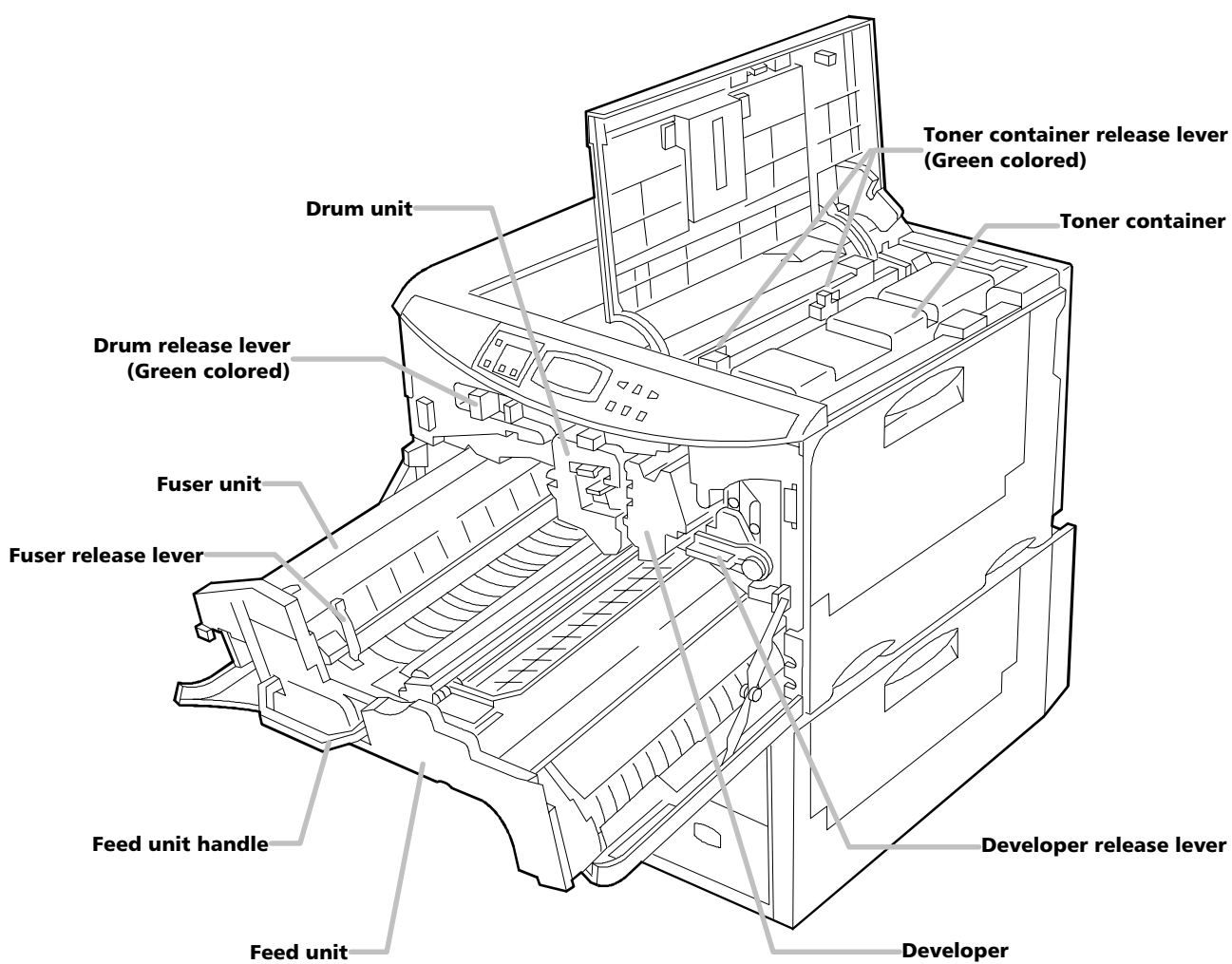




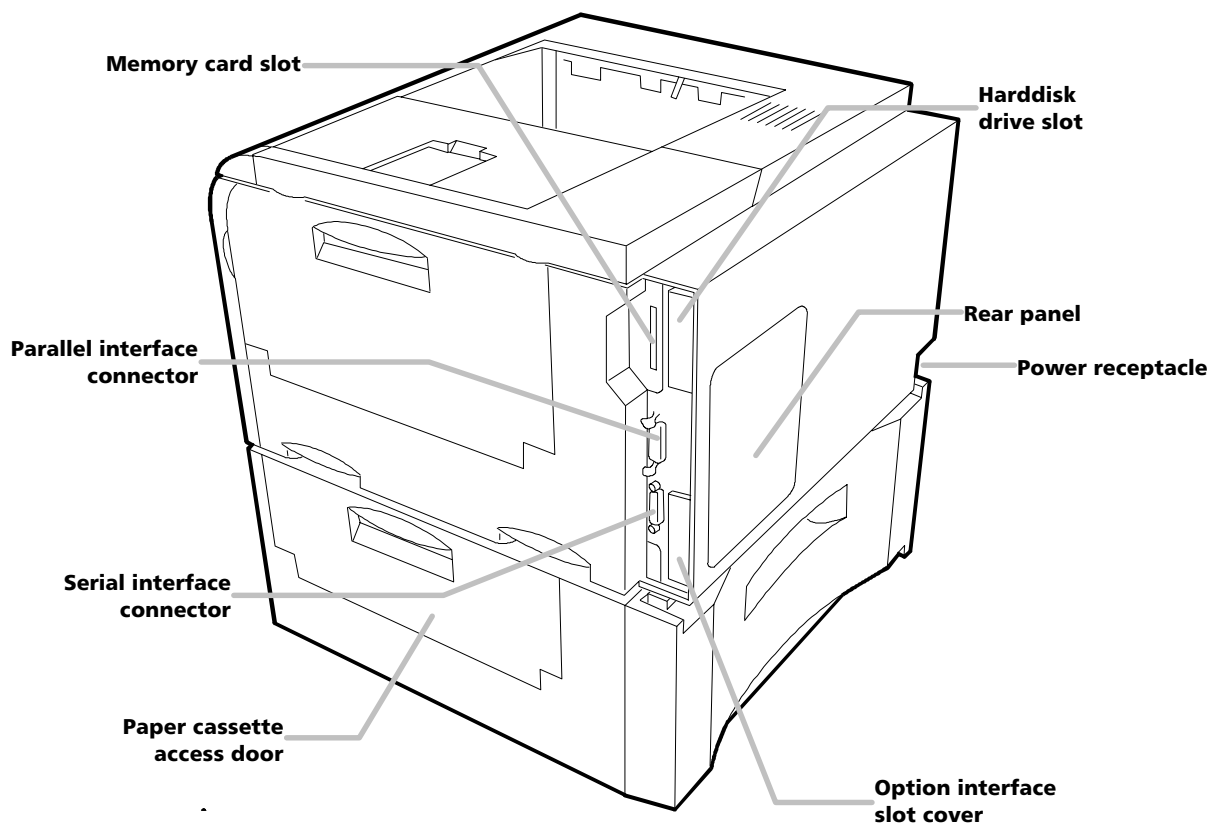
**Left side view**



**Internal assemblies**

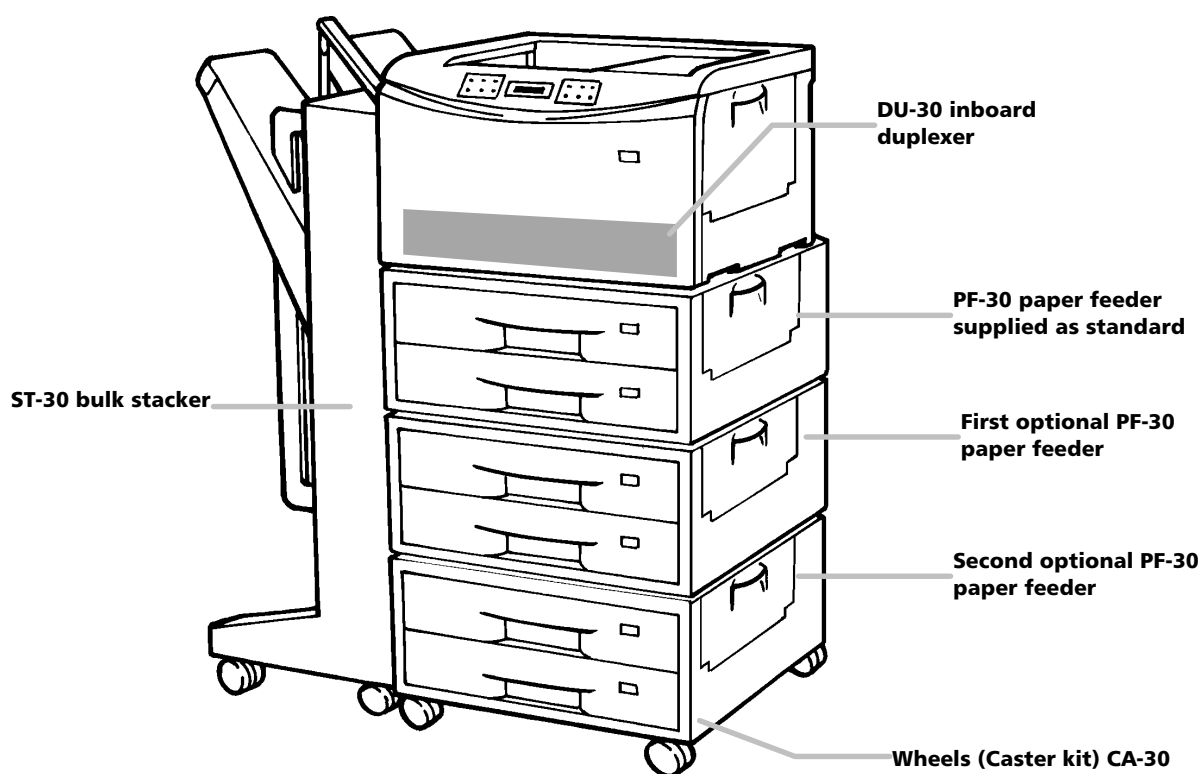


**Rear view**



## Options

The example option units for the FS-7000 are shown below. The *User's Manual* come with the printer has more information regarding the accessories available for this model.



## Safety information

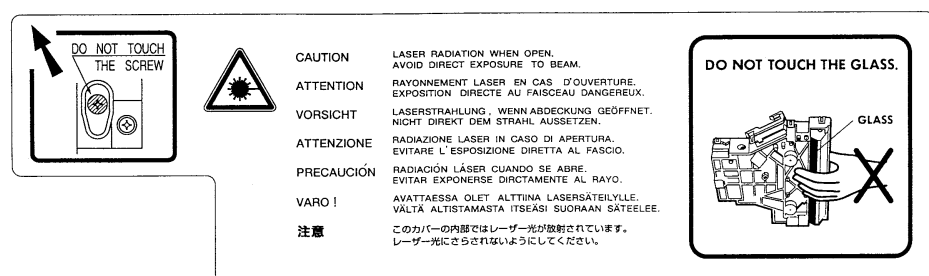
### Laser notice for service person (U.S.A.)

This printer is certified in the U.S. to conform to the requirements of DHHS 21 Cfr Subchapter for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 825.

Class I laser products are not considered to be hazardous. The printer contains internally a Class IIIa (3a) laser that is nominally a 5 milliwatt laser operating in the wavelength region of 680 nano-meters. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

### Laser caution label on the scanner unit

The laser scanner unit has the following label affixed atop. Observe these cautionary statements and figures when handling the laser scanner unit.



**Warning—Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.**

### **CDRH regulations (U.S.A.)**

The Center of Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured after August 1, 1976. Compliance is mandatory for products marketed in the United States. A label indicating compliance with the CDRH regulations must be attached to laser products marketed in the United States.

### **Ozone concentration**

Laser printers generate ozone gas (O<sub>3</sub>) which may concentrate in the place of installation and cause an unpleasant smell. To minimize the concentration of ozone gas, we recommend that the laser printer not be installed in a confined area lacking ventilation.

### **FCC notice (U.S.A.)**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- \* Reorient or relocate the receiving antenna.
- \* Increase the separation between the equipment and receiver.
- \* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- \* Consult the dealer or an experienced radio/TV technician for help.

Change or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

Interference cable to the computer shall be used with shielded circular cable.

Any modification without prior permission may cause harmful interface. If any modification/change is introduced to this equipment without prior permission, Kyocera, as the manufacturer, cannot guarantee compliance with FCC rules.

To use equipment which does not comply with FCC rules is prohibited.

### **Option equipment**

The printer may be optionally installed with the following units, with compliance with class B limits:

- EF-1—Envelope Feeder
- DU-30—Duplexer
- DO-30—Document Stacker
- HD-1—Harddisk Unit
- PF-30—Paper Feeder (500 sheets)
- ST-30—Bulk Paper Stacker (3000 sheets)
- UF-1—Universal Feeder
- DF-30—Document Finisher (1800 sheets)
- PK-series—KPD L (PostScript® compatible) Upgrade Kit

### **Important note on the interface connectors**

Be sure to turn off printer power before connecting or disconnecting an interface cable to the printer. For protection against static discharge which may be applied to the printer's internal electronics through the interface connector(s), keep any interface connector which is not in use capped using the protective cap supplied.



***Warning*—This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, etc.) certified to comply with the Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.**





**Canadian Department of Communications compliance statement**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

**Avis de conformité aux normes du ministère des Communications du Canada**

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



**ISO 7779**

Maschinenlärminformationsverordnung 3. GSGV, 18.01.1991: Der höchste Schalldruckpegel beträgt 70 dB(A) oder weniger gemäß ISO 7779.

## Environmental requirements

### Environmental conditions

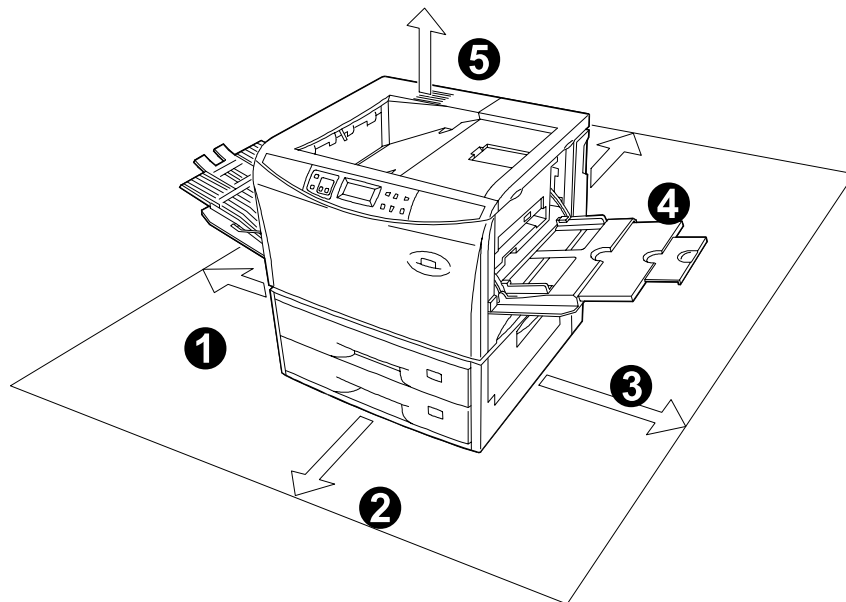
The *Environmental requirements* section on page 1-6 should be observed to ensure the optimum operation of the printer. The use of the printer in a location which does not satisfy the requirements may result in troubles and risk shortening its service life.

The printer will work best if it is installed in a location that is:

- Level and well supported (Place the printer on a sturdy table or desk.)
- Not exposed to sunlight or other bright light (not next to an uncurtained window). Do not place the printer on an unstable cart, stand, or table.
- Near an AC wall outlet, preferably one that can be used for the printer alone (See section Power requirements on page 1-5). (The outlet should have a ground slot, or an adapter should be used. If you use an extension cord, the total length of the power cord plus extension cord should be 17 feet or 5 meters or less.
- Well ventilated, not too hot or cold, and not too damp or dry (See section Environmental requirements on page 1-6). If you install the printer where the temperature or humidity is outside the requirements in section Environmental requirements in chapter 1, the best print quality may not be expected and there will be an increased chance of paper jams.
- Provide a sufficient clearances around the printer to ensure ventilation and ease of access. See section Clearance on page 1-18.)

### Clearance

Allow the necessary minimum clearance on all sides of the printer (below). A total space of 92 by 138 cm (36 by 54") is needed.



Clearance	Dimensions
Left ❶	45 cm (17.7"), or 30 cm (12") if the face-up tray is not used.
Front ❷	60 cm (24")
Right ❸	45 cm (17.7")
Back ❹	20 cm (8")
Above ❺	30 cm (12")

### **Places to avoid**

Avoid installing the printer in locations exposed to:

- Direct drafts of hot or cold air.
- Direct drafts of outside air. (Avoid locations next to outside doors.)
- Sudden temperature or humidity changes.
- Any source of high heat, such as a radiator or stove.
- Excessive dust. Dust and smoke may cause contamination on the laser scanner window, causing print quality problem.
- Vibration.
- Ammonia fumes or other harmful fumes. (In case of humigating the room or saturate it with insecticide, remove the printer first.)
- Avoid greenhouse-like rooms. (Because of sunlight and humidity.)
- Avoid enclosed spaces that block ventilation.
- Avoid sites more than 6500 feet or 2000 meters above sea level.

### **Note on power**

Use only the power source voltage conforming to the printer's rated power voltage (See the *Power requirements* on page 1-5). Do not use other power sources.

- Disconnect the printer from the power source before attempting removal or replacement of an electrical component or a printed-circuit board.
- The printer should not be connected to a power source until the instruction is given to do so when performing tests described in this manual.
- In connecting the printer power, exercise an extreme care in handling the power supply or any other electric parts which may give an electric shock.
- Before performing maintenance or repair, power from both the power source and the associated peripheral devices (computer, sorter, etc.) should be disconnected, unless otherwise specified.
- To avoid possible electrical shock, extreme caution must be exercised in handling the power cord and any other electrical part.
- An easily accessible socket outlet must be provided near the equipment.

## About the toner

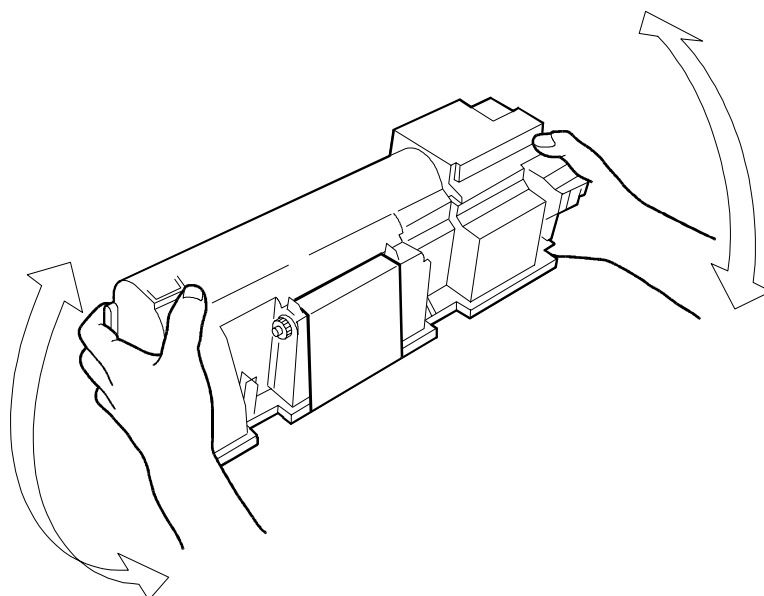
The printer should use Kyocera TK-30 Toner Kit. To ensure the high print quality and long service life, the following handling precautions should apply.



**Caution**—As the Ecosys printers are designed to ensure the optimum print quality when used with the Kyocera's proprietary toner, Kyocera do not recommend to use any refilled toner containers that may be available commercially. This is because Kyocera have no means for control over how such refilled toner could affect the print quality and the reliability of the printer.

### Toner container handling

To loosen and mix the toner inside before use, with the label side down, thoroughly shake the toner container (in the direction of the arrow) 5 times or more.



**Caution**—Do not attempt to disassemble or refill the toner container.

### **Toner storage**

The toner contained in the container is susceptible to temperature and humidity. To ensure the high print quality, store the toner container in a place that satisfy the following environmental conditions:

Temperature	-20°C to 40°C (-4°F to 104°F)
Humidity	15 to 90% RH



**Note**—If the toner container is removed from the printer's developer unit, put it in a protective bag and keep it in a dark place.

**Caution**—If the printer is shipped for return, etc., do not ship it with the toner container installed. Otherwise, toner may leak and contamination may result in the printer.

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