

IBM System/3 Installation Manual— Physical Planning

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Preface

This publication contains information about the physical installation of an IBM System/3. It includes information about space requirements and site selection, a proposed planning schedule, and a brief description of the System/3 units and their layouts (plan views), with explanations of electrical and environmental requirements.

The requirements of the system are subject to modification by engineering development.

Tenth Edition (July 1977)

This is a major revision of, and obsoletes, GA21-9084-8. Minor changes have been made through the manual. Changes are indicated by a vertical line at the left of the change.

Changes are continually made to the specifications herein; any such changes will be reported in subsequent revisions or technical newsletters.

Requests for copies of IBM publications should be made to your IBM representative or to the IBM branch office serving your locality.

If you have a request for a change in programming or hardware design, contact your local IBM branch office.

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Customers planning an IBM System/3 installation should use this manual as a guide to determine how they can best prepare their property for the arrival and installation of the system. Careful advance planning makes it possible for a customer to install his equipment and units with little or no interruption of the daily office routine. If the recommendations contained in this manual are followed, all physical and environmental requirements will be satisfied before the machines arrive.

IBM sales representatives, customer engineers, and installation planning representatives are available to consult with customers and provide assistance when requested to do so.

SYSTEM ARRANGEMENT AND SPACE REQUIREMENTS

The IBM System/3 is a compact arrangement of its functioning units. This reduces space requirements, reduces the need for raised floors, and provides efficient and convenient operator access. Because data processing areas differ in room sizes, column spacing, and combinations of machines, equipment, and work areas, it is advisable to prepare a floor plan of the proposed data processing area showing the location and arrangement of all equipment to be included. As you plan the area, consider the possibility of future expansion so that, as your business grows, you can add additional equipment to the initial installation without costly and time-consuming revisions to the original plans or system area. If the installation will include several cable connected units, a raised floor area should be considered. Each installation will also have other equipment, such as work tables, desks, chairs, and storage cabinets, that should be included in the floor plans for the system area. Enough space should also be provided to prevent loss in operating efficiency.

As an aid in determining your floor plan, IBM provides plastic templates (order number X21-9098) of each of the System/3 units. The templates are scaled at 1/4 inch = 1 foot (1 mm = 50 mm), and show the floor space and working clearance required for each unit. When cut out and used on an equivalent scale drawing of the data processing area, the templates can be moved about to help determine the best room arrangement. Service clearances can be overlapped if the larger clearance is maintained. Space limitations, cover clearance, storage space, and access aisles may dictate several tentative arrangements before the final floor plan is established. If the scale drawing is on translucent

material and the templates are fastened lightly to the drawing with transparent tape, the proposed floor plans can be copied by many standard reproducing machines.

Weights of the various units do not exceed the floor loading capacity of most buildings. If it seems that the floor loading capacity may be exceeded, refer the matter to your engineering staff or consultants for investigation.

In summary, consider the following items when determining space requirements and unit locations:

1. Work space
2. Storage space
3. Desk space
4. Aisle space
5. Service clearance
6. Future expansion
7. Weights and floor loading
8. Heat dissipation
9. Electrical requirements, including service, outlets, and communications facilities.
10. Doorway sizes, elevator capacities, and loading facilities used in getting the machines to their locations.

Raised Floors

A raised floor:

- Allows future layout change with minimum reconstruction cost.
- Protects the interconnecting cables and power receptacles.
- Provides personnel safety.

A raised floor can be constructed of steel, aluminum, or fire-resistant wood. (The free-access type raised floor is preferred.) If metal is used, there must be no metal exposed to the walking surface. Such exposure is considered an electrical safety hazard. An exposed metal surface can also cause static discharge problems.

The raised floor should be high enough to accommodate IBM cables, power distribution, etc. A floor height between 4 inches and 12 inches (10 cm and 31 cm) usually is acceptable.

SCHEDULING

To be sure that the machine area is ready when the system is delivered, make a physical planning schedule. Because each installation will differ in some respect from any other, it is not possible to provide a precise schedule in this publication. The following schedule can be modified to meet the needs of a given installation.

Six Months before Delivery

Review the order six months before equipment delivery. At this time the preliminary layout of the proposed installation should be prepared.

Four Months before Delivery

Four months before machines are scheduled to arrive, plans for the machine room should be complete and should have been approved by both the customer and the IBM representative. If building alterations (such as painting, plastering, or expanding electric service or communications facilities) are required, have all drawings and specifications for these alterations complete and the areas ready for work to start. If external cables are required between units of the system, submit a cable order form at this time if it has not already been submitted.

One Week before Machine Delivery

Have all planned modifications for wiring, air conditioning, and communications facilities complete and tested by one week before machine delivery. Building alterations should also be complete at this time.

ENVIRONMENTAL CONSIDERATIONS

Temperature and Humidity

The temperature and humidity of a data processing area are influenced by many factors. These include:

- Heat loads produced by mechanical and electrical equipment.
- The volume of fresh air entering the room, its temperature, and its humidity.
- The amount of body heat introduced by personnel.
- The amount of heat introduced or dissipated through walls, ceilings, and floors.

The heat produced by IBM units, listed in Btu/hr and kcal/hr in the summary of specifications at the back of this manual, may be a significant factor.

As these factors change, varying amounts of heat and humidity may need to be deliberately introduced or dissipated by means of heating, cooling, and humidity controlling equipment to maintain an acceptable environment.

All System/3 units are designed to operate at altitudes up to 7000 feet (2134m) and are air cooled. Fans or natural convection bring cool air into the unit from the bottom or side, circulate the air, and exhaust the resulting heated air into the data processing room.

See the specification pages for temperature and relative humidity requirements.

Air conditioning equipment may be needed in some cases because of possible extremes in temperature or humidity in the data processing area. When such equipment is required, it is recommended that it be designed for operation between 70° and 75°F (21° and 24°C) and 40% and 50% relative humidity. This recommended range for temperature or humidity provides a large unit-available time buffer between the time that temperature or humidity leaves the range and reaches the permitted extreme. The operator can use this time buffer to take corrective measures. This range has also proven to be a generally acceptable personnel comfort level.

Humidity-Associated Problems

Extremes in relative humidity, if maintained for long periods of time, may have an adverse effect on the overall operating efficiency of the installation and should be avoided whenever possible. Humidity levels approaching the maximum limit may cause improper feeding and stacking of cards, paper documents and continuous forms. High relative humidity may also cause operator discomfort and condensation on windows and outside walls.

Humidity levels approaching the minimum limit aggravate problems associated with static electricity. Static charges, which are usually dissipated without any adverse effects, tend to build into significant charges when the humidity is low. This accumulation causes paper to cling together and can also interfere with the most efficient feeding and stacking of cards and paper. High voltage static discharges from moving people, carts, furniture, paper, etc, can be objectionable to operating personnel and, in extreme cases, can interfere with the correct operation of electronic equipment.

Card and Paper Document Storage

Storage areas for cards and paper should be kept at the same relative humidity as the air in the data processing room. Otherwise, extremes in humidity differences in the two areas may alter the size and weight of the card and paper when the documents are moved into the working area. This rapid change can result in warpage, the most frequent source of feeding and stacking problems.

If working and storage areas cannot be kept at the same relative humidity, allow ample time for cards and paper to achieve a moisture balance with the data processing room atmosphere before using the documents.

Do not store cards near heating pipes, radiators, or in places that are hot and dry. If you do, the cards may lose moisture, shrink in all dimensions, and buckle.

Dirt and Air Pollution

The amount of contamination usually found in air within a normal business environment will not interfere with the operation of the IBM equipment. However, take normal precautions to keep dust, dirt, and other foreign matter away from the machines. If the system must be installed in an area having a high dust content or where there is an exposure to abrasive materials or corrosive gases, contact an IBM installation planning engineer for advice and recommendations.

Room Acoustics

If you need a quieter room, consider the following acoustical treatments:

1. The greatest sound reduction will be achieved by treating the ceiling. Best results can be expected from a dropped porous ceiling. If overhead ducts exist, noise may be transmitted from room to room unless proper precautions are taken.
2. For large rooms, the floor is the second most effective area on which to apply absorbent material.
3. Reflective and transmitted sound can be reduced by proper treatment of the walls.

Fire Protection Equipment

The machine room should be equipped with portable fire extinguishers of suitable size for quick, efficient use.

A nonwetting fire extinguishing agent for electrical equipment (Class C hazard) is recommended. If local building codes, ordinances, or insurance regulation require automatic water sprinklers, a pre-action sprinkler system is suggested, provided that this type of sprinkler is in agreement with local codes and regulations.

CABLING

The compact arrangement of System/3 units reduces the need for external cables. Electrical connections between the processing unit and units that can be physically attached to it are made with internal cables. These cables are supplied with the units and do not require special ordering.

Other units can be connected to System/3 by means of IBM-provided external interconnecting cables. The cables required for this interconnection are shown in section 4, *System/3 Cabling Information*.

Each cable is identified by a cable group number and is ordered by filling in the desired length on the Cable Order Form (Z120-2150). The cable length is determined by measuring the center-to-center distance between machine cable entry holes along the intended route of the cable. When machines are mounted on a raised floor, add twice the height of the raised floor to the distance between machine cable entry holes. IBM makes allowance for that portion of the cable that is from the floor into the machine. Cable lengths should be kept as short as practicable.

External cables must be ordered at least 120 days prior to machine delivery. Orders with less than 120 days lead time, or orders for cables that exceed the maximum length, may result in extra charges. Consult your IBM sales representative.

External cables should be protected from physical damage in some manner that does not present a safety hazard to operating personnel.

ELECTRICAL REQUIREMENTS

All reasonable efforts have been made in the machine design to ensure satisfactory operation from the normal power supplied by most power companies. There are, however, many outside sources that can cause transient electrical noise signals which may affect machine operations.

The electric power environment should be checked for unusual loads which might induce excessive noise into the branch circuit for the system. Switching heavy inductive loads or operating certain types of equipment near the system can cause problems, even though the source is on a different branch circuit. If such a condition is suspected, a thorough investigation should be made to determine whether corrective measures should be taken. In some cases, it may be advisable to provide a separate feeder for the system directly from the main building power. In extreme cases of severe electrical noise, it may be necessary to install an isolation transformer and/or an RF filter.

Some common sources of electrical noise are:

- air conditioning devices
- electrical welders
- electrical furnaces
- elevators
- electrostatic copying machines
- large, brush-type motors

An IBM installation planning engineer should be consulted if doubt exists whether corrective or preventive measures should be taken.

Power Supply

The IBM System/3 processing units operate on standard three-phase power (single phase operation is available for the Models 4 and 6 in 208/230 volt, 60 Hz only). Most other units used with the system operate on single phase power. Refer to the summary of specifications for the requirements of individual units.

The voltage tolerance must be maintained within $\pm 10\%$ of the rated machine voltage (measured at the receptacle) when the units are operating.

The line frequency must be maintained within $\pm 1/2$ cycle per second (Hz).

The maximum harmonic content of the power system voltage waveforms on the equipment feeder must not exceed $\pm 5\%$ when the equipment is not operating.

Power Distribution

System/3 requires no special power distribution. The system can operate on the feeder that supplies other loads if there are no unusual loads, as discussed in the preceding text. Of course, all wiring installed should comply with local electrical codes.

One branch circuit is required for the processing unit (30 ampere, three phase or 20 ampere, single phase for the 5406; 30 ampere, three phase for the 5408, 5410 and 5415). An additional 30 ampere, three phase branch circuit is required for the 5421. Power is distributed via internal system cabling from the processing unit to all physically-attached units with the exception of the 5421. Additional branch circuits may be required for other units (see Section 5, *System/3 Specification Summary*).

Branch circuits should be protected by circuit breakers suitable for motor load application and should contain wiring that will handle the same load. The circuit breakers should be placed in an unobstructed and well-lighted area in the data processing room.

As a safety precaution, there should also be provisions for simultaneously disconnecting power to all data processing equipment in the room. The disconnecting means should be controlled from locations readily accessible to the operator and at designated exits from the data processing room.

Phase Rotation

The three phase power receptacles for use with the system must be wired for correct phase rotation. The correct phase rotation (looking at the face of the receptacle) is counterclockwise from the ground pin to phase 1, to phase 2, and to phase 3.

Grounding

Power cords supplied with each IBM unit have a green (or green with yellow trace) wire grounding conductor for equipment ground. The branch circuit receptacles recommended provide for connection of this equipment ground. Each customer-supplied branch circuit must have an insulated wire conductor, equal to the size of the phase conductors, for the purpose of grounding equipment. All branch circuit grounding wires must be tied to a common ground point at the distribution panel, and a single grounding wire should be run from the distribution panel to service ground or suitable building ground. *This is a noncurrent carrying ground, not a neutral.* Conduit must not be used as the only grounding means.

Lightning Protection

It is recommended that the customer install lightning protection on his secondary power source when one or more of the following conditions apply:

1. The utility company installs lightning protectors on the primary.
2. Primary power is supplied by an overhead power service.
3. The area is subject to electrical storms or equivalent power surges.

Convenience Outlets

A suitable number of convenience outlets should be installed in the system area for use by building maintenance personnel, customer engineers, etc. The same general rules for electric power environment apply for the wiring of the convenience outlets. If the system is connected to a separate feeder, the convenience outlets should be connected to lighting or other building circuits rather than the system feeder.

SERVICING REQUIREMENTS

Consider space requirements related to servicing the equipment when you make floor plans of the data processing room. Provide space for storing systems manuals and maintenance documentation and allow space for servicing the equipment. The service clearances shown in the specification pages and in the specifications summary tables are minimum clearances needed to service the equipment. The manuals can be placed in a book cart, which can then be placed anywhere in the data processing room that does not interfere with normal work routines. For example, if the manuals are placed in a customer engineer's book cart (which is approximately 22 inches by 24 inches in dimension), documentation can be stored within the service area designated for the system.


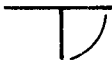
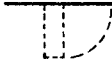






SHIPPING DIMENSIONS

Unless otherwise noted, all System/3 units can be reduced to 29-1/2 inches x 60 inches or smaller by removing unit covers, upending the unit, or both. If the unit must be upended, request SF9840 (on 5404, 5406, 5412, and 5415).









A Frame Separation Kit, SF9190, may be required at those locations where building dimensions (doorways, hallways, stairways, etc) do not allow movement of the central processor (5412 or 5415) as one unit. The local installation planning representative will determine if this kit is required.

STANDARD SYMBOLS AND SPECIFICATIONS

The specification sections of the manual contain individual pages of information about the basic systems and the units used with the systems. At the end of the manual, a chart summarizes the specifications. Standard symbols used on the specifications pages and physical planning templates are:

	Power cord exit (power cords are measured from power cord exit)
	Cover swings
	Gate swings
	Service area boundary
	Casters
	Leveling pads or glides
	Cable entry and exit in base of unit
	Use meter location
	CE service panel

This manual uses the following symbols to denote manufacturers of plugs, receptacles, and connectors:

Plug Type	Volts	Amps	Description	Plug Cap	Inline Connector/ Receptacle	Receptacle Configuration
A	208/230	20	Waterproof	3720	3913/3743	
B	208/230	15	Waterproof	3730	3914/3744	
C	208/230	30	Waterproof	3750	3933/3753	
D	208/230	30	Waterproof	3760	3934/3754	
H	115	15	Nonlock	5-15P	5-15R	
J	115	15	Lock	L5-15P	L5-15R	
K	208/230	15	Nonlock	6-15P	6-15R	
L	208/230	15	Lock	L6-15P	L6-15R	

Note: The numbers shown for plug types A, B, C, and D are Russell and Stoll (Midland-Ross Corporation) part numbers. The numbers shown for plug types H, J, K, and L are NEMA (National Electrical Manufacturer's Association) configuration numbers.

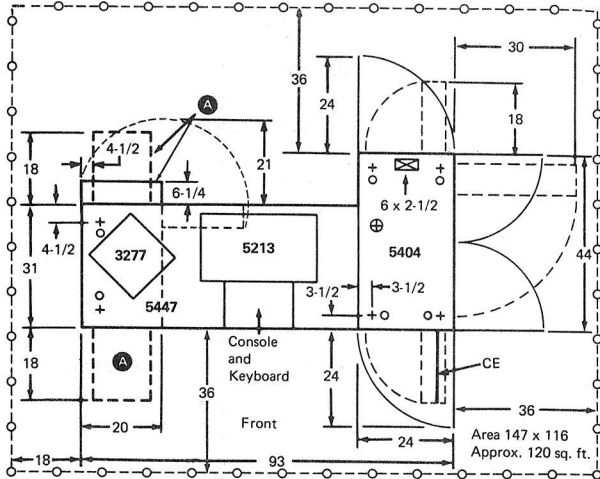
The following notes apply to unit specification pages:

1. Power cord styles shown apply to 50 Hertz machines. These machines are shipped without power plugs.
2. Voltages shown are for 60 Hertz machines only. Voltages available for 50 Hertz machines can be determined by examining the voltages specified for the machine power cord (see *Metric Units* in Section 5).
3. Plan view dimensions are shown in inches unless otherwise noted (see *Inch to Centimeter Conversion Chart* in Section 5).

Section 2. System Specifications

SYSTEM/3 MODEL 4

Plan View



- A** Disk storage drive is located in drawer under tabletop. Drawer can be extended 18 inches in front and 18 inches in rear for servicing. Gate can be pivoted under the tabletop for shipment and servicing.

Specifications

Dimensions:*

	Width	Depth	Height
Inches	93	44	45
Centimeters	236	112	114

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	36	18
Centimeters	91	91	91	46

Weight:** 1730 lb (790 kg)

Heat Output/hr:** 9475 Btu (2390 kcal)

Airflow/min: 300 ft³ (9m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA**	3.5
Phases	1 or 3

	Single Phase	Three Phase
Plug Type	A	D
Power cord style		D2

Operating Environment:

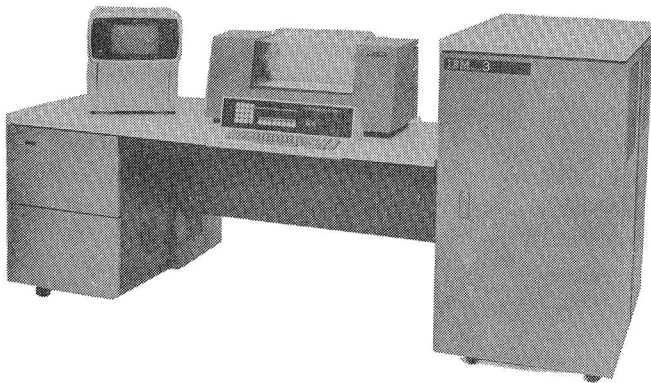
Temperature	60° to 90°F (16° to 32°C)
Relative humidity	8% to 80%
Maximum wet bulb	73°F (23°C)

Nonoperating Environment:

Temperature	50° to 110°F (10° to 43°C)
Relative humidity	8% to 80%
Maximum wet bulb	80°F (27°C)

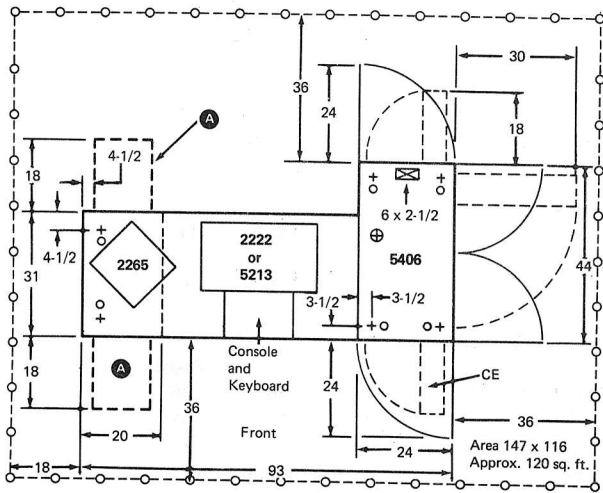
* Separated into two sections for shipment. The 5404 weighs 900 lbs; the 5447-A1, with attached 5213, weighs 670 lbs. An up-ending kit (SF9840) is available for the 5447.

** Values are for a system consisting of a 5404, a 5447-A2, a 5213, and a 3277. See Section 5, *System/3 Specification Summary* for individual unit values.



SYSTEM/3 MODEL 6

Plan View



A IBM 5444 Disk Storage Drive is located in drawer under tabletop. Drawer can be extended 18 inches in front and 18 inches in rear for servicing.

Specifications

Dimensions:*			
	Width	Depth	Height
Inches	93	44	45
Centimeters	236	112	114

Service Clearances:				
	Front	Rear	Right	Left
Inches	36	36	36	18
Centimeters	91	91	91	46

Weight:** 1800 lb (820 kg)

Heat Output/hr:** 10,000 Btu (2530 kcal)

Airflow/min: 300 ft³ (9m³)

Power Requirements:	
Voltage	208/230 ± 10%
kVA**	3.55
Phases	1 or 3

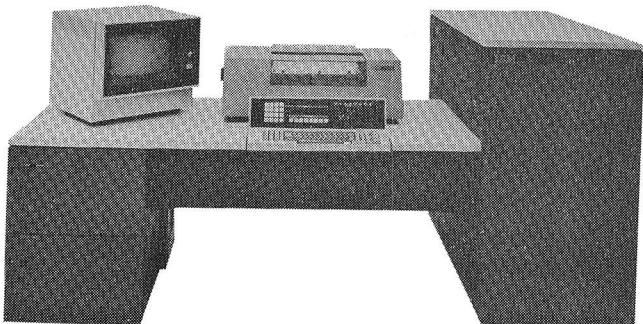
	Single Phase	Three Phase
Plug Type	A	D
Power cord style		D2

Operating Environment:	
Temperature	60° to 100° F (16° to 38° C)
Relative humidity	8% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:	
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

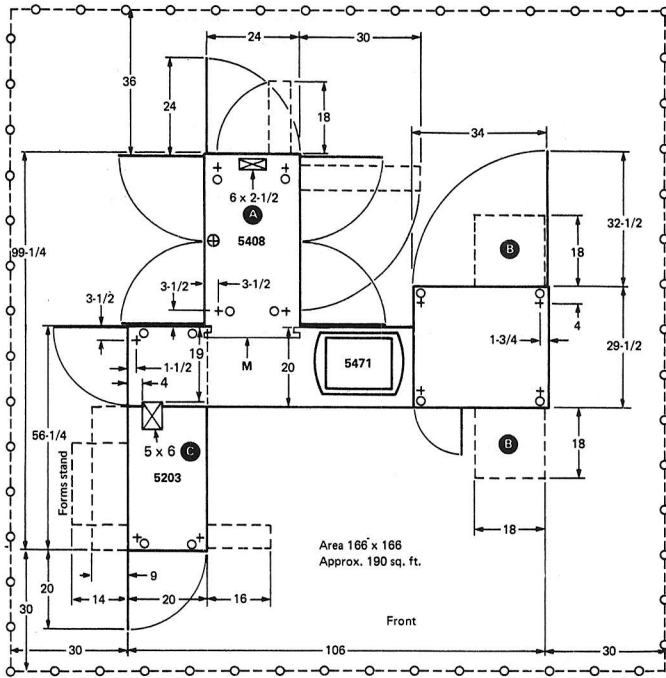
* Separated into two sections for shipment. The CPU section weighs 900 lbs; the I/O section, with the attached 2222, weighs 600 lbs. An up-ending kit (SF9840) is available for the I/O section.

** Values are for a system consisting of a 5406, a 2222, a 2265, and two 5444s. Section 5, *System/3 Specification Summary* for individual unit values.



SYSTEM/3 MODEL 8

Plan View



- A** Power cables from IBM 5448 enter here.
- B** IBM 5444 Disk Storage Drive is located in drawer in the IBM 5408. Drawer can be extended 18 inches in front and 18 inches in rear for access.
- C** Cables from the IBM 3411 and the signal cable from the IBM 5448 enter here.

Specifications

Dimensions: *

	Width	Depth	Height
Inches	106	99 1/4	46 1/4
Centimeters	269	252	117

Service Clearances:

	Front	Rear	Right	Left
Inches	30	36	30	30
Centimeters	76	91	76	76

Weight**

2120 lb (962 kg)

Heat Output/hr: **

10,700 Btu (2720 kcal)

Airflow/min:

300 ft³ (9m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA**	4.0
Phases	3
Plug Type	D
Power cord style	D2

Operating Environment:

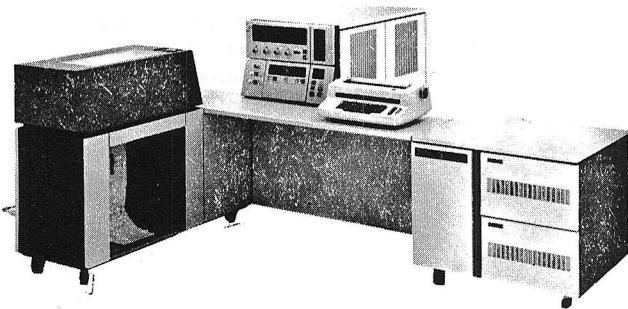
Temperature	60° to 90°F (16° to 32°C)
Relative humidity	8% to 80%
Maximum wet bulb	73°F (23°C)

Nonoperating Environment:

Temperature	50° to 110°F (10° to 43°C)
Relative humidity	8% to 80%
Maximum wet bulb	80°F (27°C)

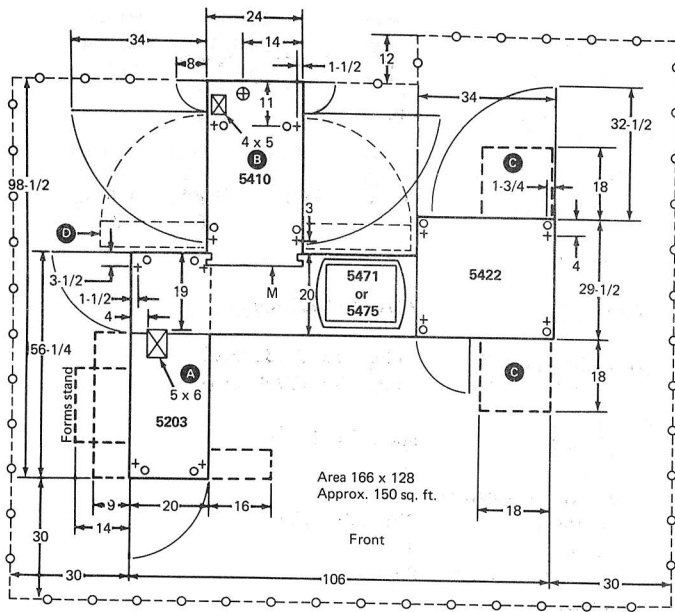
* Units are separated for shipment. See plan view for dimensions. CPU section weighs 900 lbs.

** Values for a system consisting of a 5408, a 5203 Model 1 or 2, a 5471, and two 5444s. See Section 5, *System/3 Specification Summary* for individual unit values.



SYSTEM/3 MODEL 10 WITH IBM 5422 DISK ENCLOSURE

Plan View



- A** The cable cutout in the 5203 is an entrance for cables from the IBM 3411 and the signal cable from the IBM 5448.
- B** Power cables from IBM 5448 enter here.
- C** IBM 5444 Disk Storage Drive is located in drawer in the IBM 5422. Drawer can be extended 18 inches in front and 18 inches in rear for access.
- D** This gate is only on systems equipped with the Processor Unit Expansion special feature (SF5732).

Specifications

Dimensions:*

	Width	Depth	Height
Inches	106	98-1/2	60
Centimeters	269	250	152

Service Clearances:

	Front	Rear	Right	Left
Inches	30	*	30	30
Centimeters	76	*	76	76

Weight:**

2640 lb (1240 kg)

Heat Output/hr:**

15,000 Btu (3780 kcal)
With SF5734 20,700 Btu (5220 kcal)

Airflow/min:

500 ft³ (13 m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA**	5.0
With SF5734	6.8
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

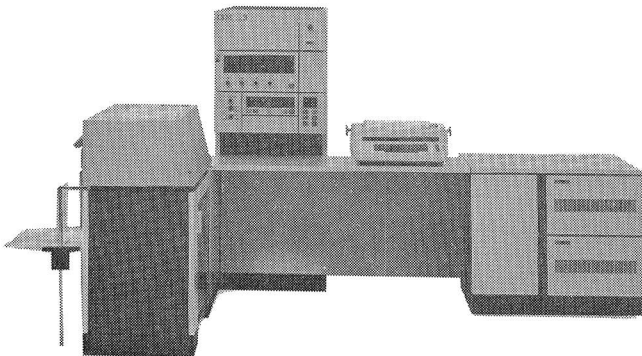
Temperature	60° to 100°F (16° to 38°C)
Relative humidity	8% to 80%
Maximum wet bulb	78°F (26°C)

Nonoperating Environment:

Temperature	50° to 110°F (10° to 43°C)
Relative humidity	8% to 80%
Maximum wet bulb	80°F (27°C)

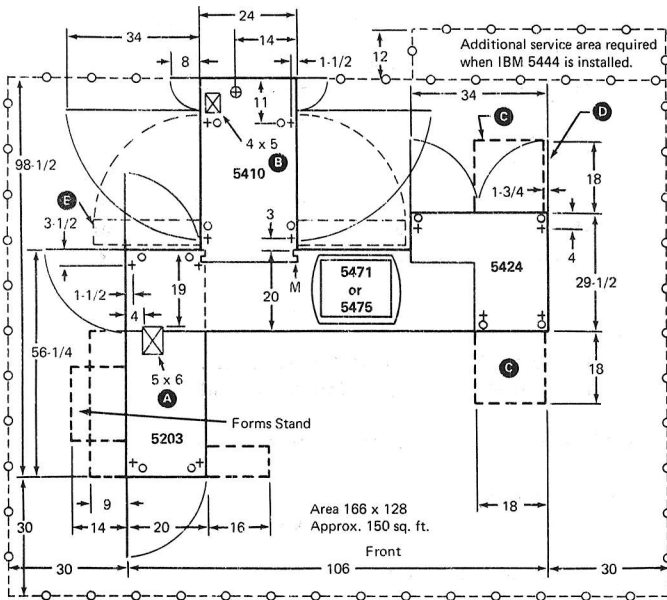
* Units are separated for shipment. See plan view for dimensions.

** Values for a system consisting of a 5410, a 5203 Model 1 or 2, a 5471, a 5422, a 1442, and two 5444s. See Section 5, *System/3 Specification Summary* for individual unit values. SF5734 designates processing unit expansion.



SYSTEM/3 MODEL 10 WITH IBM 5424 MFCU

Plan View



- A** The cable cutout in the 5203 is an entrance for cables from the IBM 3411 and the signal cable from the IBM 5448.
- B** Power cables from IBM 5448 enter here.
- C** IBM 5444 Disk Storage Drive is located in drawer in base of 5424 MFCU. Drawer can be extended 18 inches in front and 18 inches in rear for access.
- D** On disk-oriented systems, the MFCU rear right cover is 7 inches thick, swings 150°, and may be removed for machine installation.
- E** This gate is only on systems equipped with the Processor Unit Expansion special feature (SF5732).

Specifications

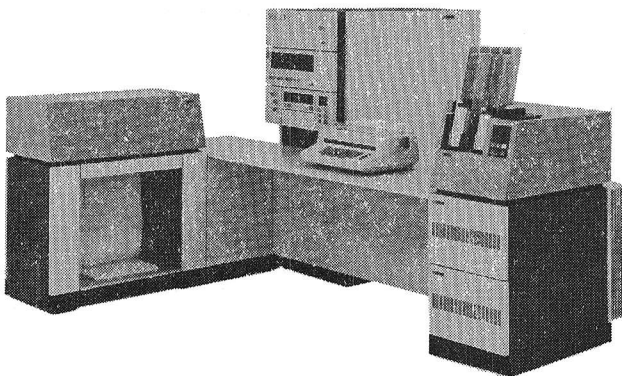
Dimensions:*				
	Width	Depth	Height	
Inches	106	98-1/2	60	
Centimeters	269	250	152	
Service Clearances:				
	Front	Rear	Right	Left
Inches	30	*	30	30
Centimeters	76	*	76	76
Weight:**				
	2310 lb (1050 kg)			
Heat Output/hr:**				
	14,200 Btu (3580 kcal)			
	With SF5734 19,900 Btu (5020 kcal)			
Airflow/min:				
	500 ft ³ (13 m ³)			
Power Requirements:				
	Voltage 208/230 ± 10%			
	kVA** 4.7			
	With SF5734 6.5			
	Phases 3			
	Plug Type D			
	Power cord style B1			

Operating Environment:	
Temperature	60° to 100°F (16° to 38°C)
Relative humidity	8% to 80%
Maximum wet bulb	78°F (26°C)

Nonoperating Environment:	
Temperature	50° to 110°F (10° to 43°C)
Relative humidity	8% to 80%
Maximum wet bulb	80°F (27°C)

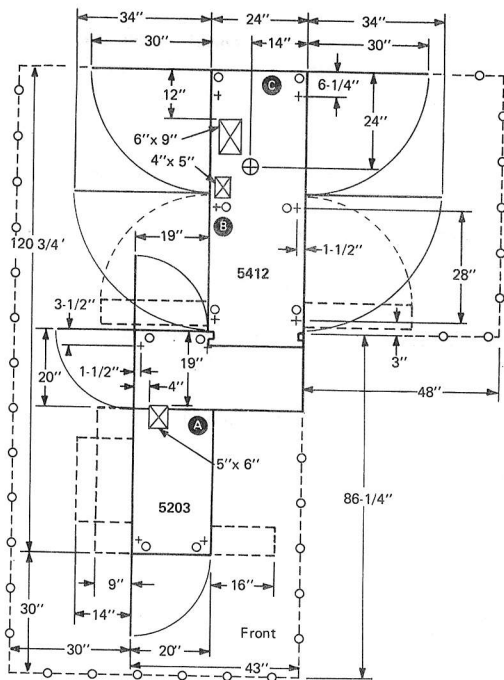
* Units are separated for shipment. See plan view for dimensions.

** Values for a system consisting of a 5410, a 5203 Model 1 or 2, a 5471, a 5424, and two 5444s. See Section 5, *System/3 Specification Summary* for individual unit values. SF5734 designates processing unit expansion.

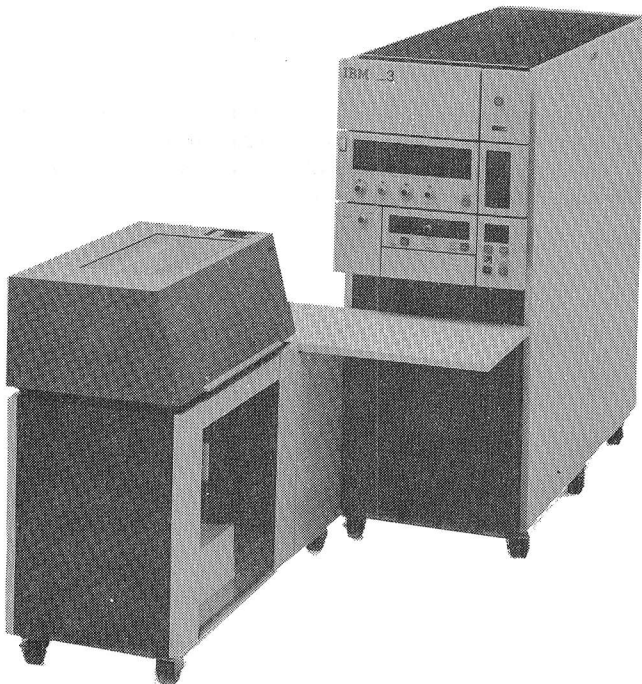


SYSTEM/3 MODEL 12 WITH 5203

Plan View



- A** For cables from 3411.
- B** For cables from 1442, 3741, data sets, and local directly attached (that is, without data set or modem) communication devices.
- C** For cables from 3340, and cables to the local display adapter.



Specifications

Dimensions: *

	Width	Depth	Height
Inches	43	120-3/4	60
Centimeters	109	307	152

Service Clearances:

	Front	Rear	Right	Left
Inches	30	0	**	30
Centimeters	76	0		76

Weight:*** 1800 lb (820 kg)

Heat Output/hr:***
 With SF5732 13,200 Btu (3330 kcal)
 With SF5734 16,700 Btu (4200 kcal)
 19,700 Btu (4970 kcal)

Airflow/min: 500 ft³ (14m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA***	4.1
With SF5732	5.2
With SF5734	6.3
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	73° F (23° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

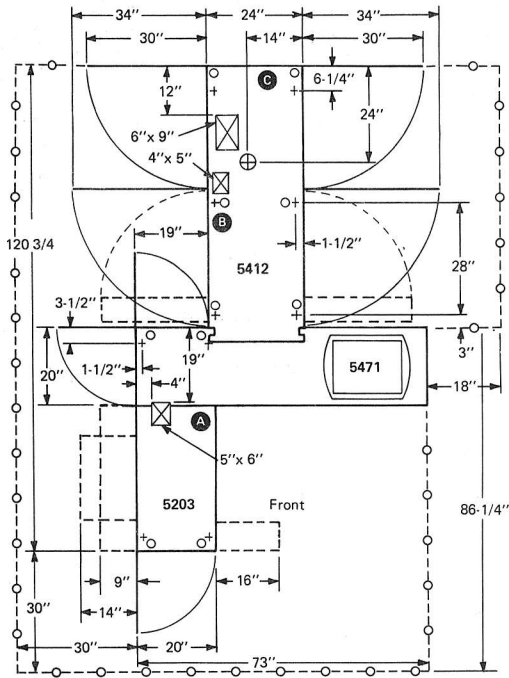
* Units are separated for shipment. See *Shipping Dimensions* in Section 1, for further information.

** See plan view.

*** Values for a system consisting of a 5412 and a 5203 Model 1 or 2. See Section 5, *System/3 Specification Summary* for individual unit values. SF5732 and SF5734 designate processing unit expansions.

SYSTEM/3 MODEL 12 WITH 5203 AND 5471

Plan View



- A** For cables from 3411.
- B** For cables from 1442, 3741, data sets, and local directly attached (that is, without data set or modem) communication devices.
- C** For cables from 3340, and cables to the local display adapter.

Specifications

Dimensions: *

	Width	Depth	Height
Inches	73	120-3/4	60
Centimeters	185	307	152

Service Clearances:

	Front	Rear	Right	Left
Inches	30	0	**	30
Centimeters	76	0		76

Weight (Maximum): ***

1860 lb (850 kg)

Heat Output/hr: ***

13,700 Btu (3450 kcal)
With SF5732
17,200 Btu (4330 kcal)
With SF5734
20,200 Btu (5090 kcal)

Airflow/mn:

500 ft³ (14m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA ***	4.3
With SF5732	5.4
With SF5734	6.5
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	73° F (23° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* Units are separated for shipment. See *Shipping Dimensions* in Section 1, for further information.

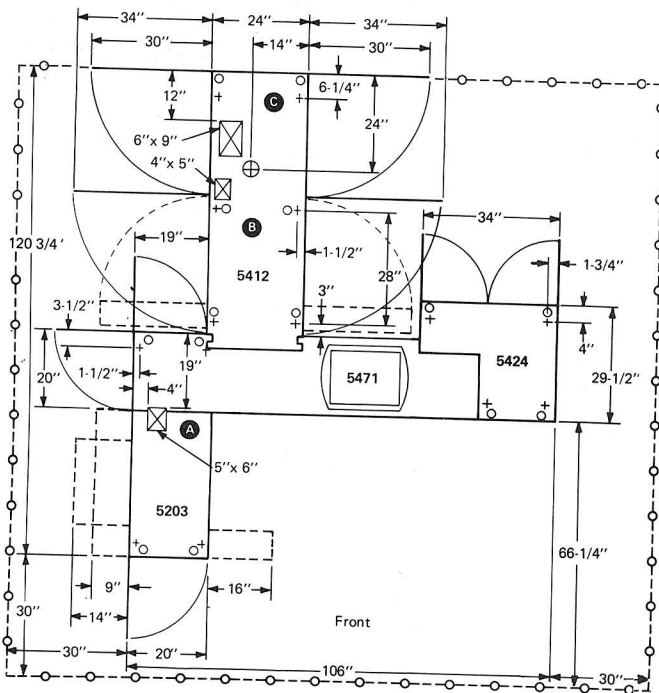
** See plan view.

*** Values for a system consisting of a 5412, a 5203 Model 1 or 2, and a 5471. See Section 5, *System/3 Specification Summary* for individual unit values. SF5732 and SF5734 designate processing unit expansions.



SYSTEM/3 MODEL 12 WITH 5203, 5424, AND 5471

Plan View



- A** For cables from 3411.
- B** For cables from 1442, 3741, data sets, and local directly attached (that is, without data set or modem) communication devices.
- C** For cables from 3340, and cables to the local display adapter.

Specifications

Dimensions:*

	Width	Depth	Height
Inches	106	120-3/4	60
Centimeters	269	307	152

Service Clearances:

	Front	Rear	Right	Left
Inches	30	0	30	30
Centimeters	76	0	76	76

Weight**

2310 lb (1055 kg)

Heat Output/hr:**

15,700 Btu (3950 kcal)
With SF5732
19,200 Btu (4850 kcal)
With SF5734
22,200 Btu (5600 kcal)

Airflow/min:

500 ft³ (14m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA**	5.1
With SF5732	6.2
With SF5734	7.3
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

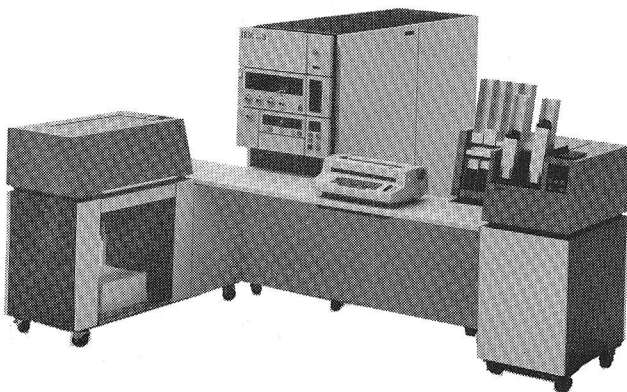
Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	73° F (23° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

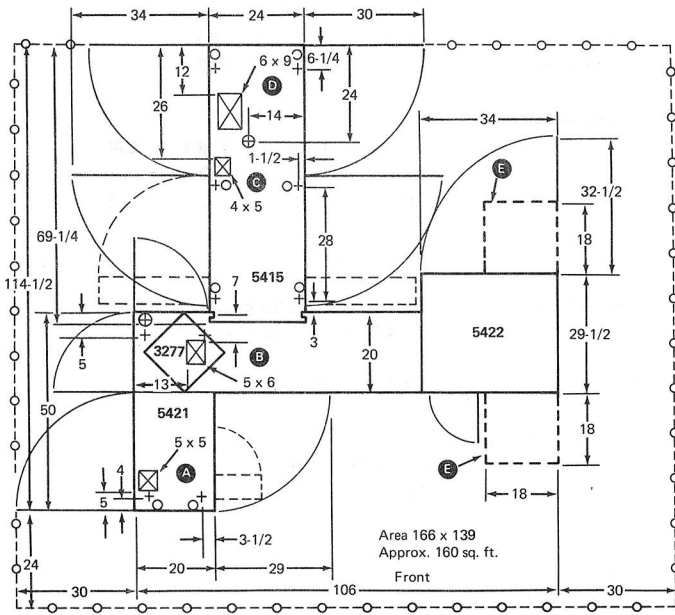
* Units are separated for shipment. See *Shipping Dimensions* in Section 1, for further information.

** Values for a system consisting of a 5412, a 5203 Model 1 or 2, a 5424, and a 5471. See Section 5, *System/3 Specification Summary* for individual unit values. SF5732 and SF5734 designate processing unit expansions.



SYSTEM/3 MODEL 15 WITH IBM 5422 DISK ENCLOSURE

Plan View



- A** For cables from 1403.
- B** For cables from 3284 and 3411.
- C** For cables from 1442, 3741, data sets, and local directly-attached (that is, without data set or modem) communications devices.
- D** For cables from 2501, 2560, and 5445.
- E** IBM 5444 Disk Storage Drive is located in drawer in the IBM 5422. Drawer can be extended 18 inches in front and rear for access.

Specifications

Dimensions:*

	Width	Depth	Height
Inches	106	114-1/2	60
Centimeters	269	291	152

Service Clearances:

	Front	Rear	Right	Left
Inches	24	0	30	30
Centimeters	61	0	76	76

Weight:**

2310 lb (1055 kg)

Heat Output/hr:**

19,425 Btu (5000 kcal)
With SF5734 22,425 Btu (5700 kcal)

Airflow/min:

1000 ft³ (28 m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA**	6.6
With SF5734	7.7
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

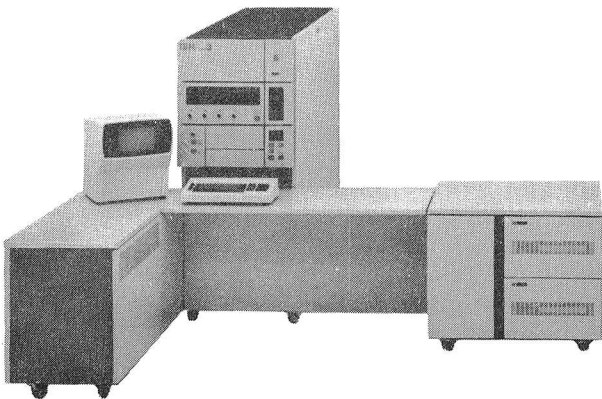
Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	73° F (23° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

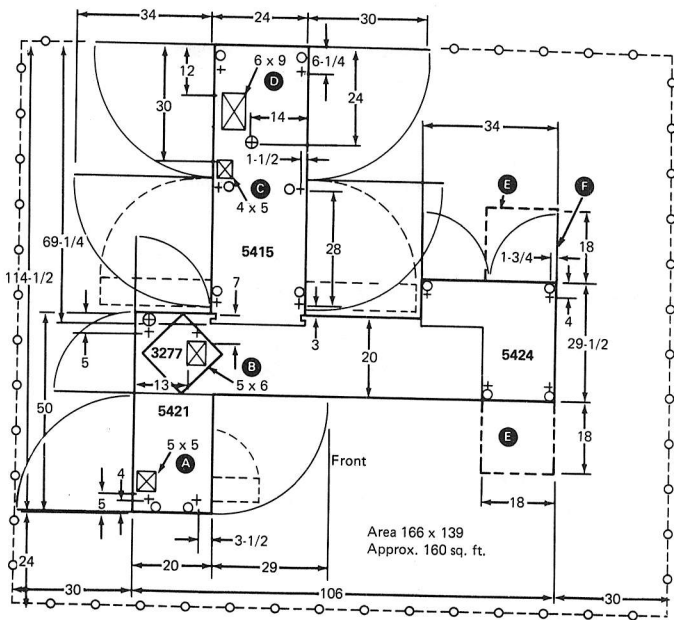
* Units are separated for shipment. See *Shipping Dimensions* in Section 1, for further information.

** Values for a system consisting of a 5415, a 5421, a 3277, a 5422, and two 5444s. See Section 5, *System/3 Specification Summary* for individual unit values. SF5734 designates processing unit expansion.



SYSTEM/3 MODEL 15 WITH IBM 5424 MFCU

Plan View



- A** For cables from 1403.
- B** For cables from 3284 and 3411.
- C** For cables from 1442, 3741, data sets, and local directly-attached (that is, without data set or modem) communication devices.
- D** For cables from 2501, 2560, and 5445.
- E** IBM 5444 Disk Storage Drive is located in the drawer in the base of the IBM 5424. Drawer can be extended 18 inches in front and rear for access.
- F** On disk-oriented systems, the MFCU rear right cover is 7 inches thick, swings 150°, and may be removed for machine installation.

Specifications

Dimensions: *

	Width	Depth	Height
Inches	106	114-1/2	60
Centimeters	269	291	152

Service Clearances:

	Front	Rear	Right	Left
Inches	24	0	30	30
Centimeters	61	0	76	76

Weight: **

2500 lb (1140 kg)

Heat Output/hr: **

20,425 Btu (5250 kcal)
With SF5734
23,425 Btu (5950 kcal)

Airflow/min:

1000 ft³ (28 m³)

Power Requirements:

Voltage	208/230 ± 10%
kVa**	7.0
With SF5734	8.1
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

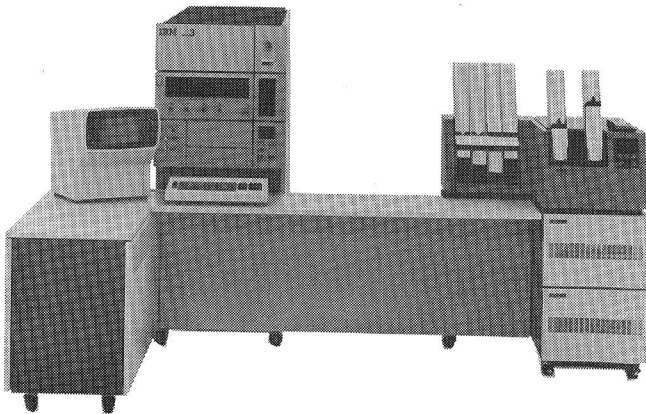
Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	73° F (23° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

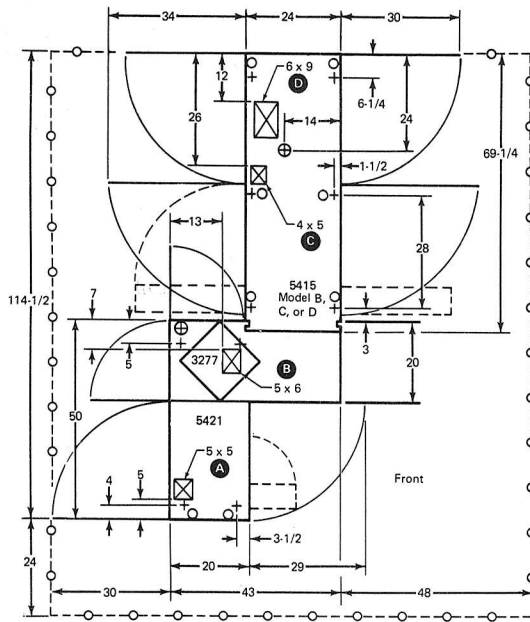
* Units are separated for shipment. See *Shipping Dimensions* in Section 1 for further information.

** Values for a system consisting of a 5415, a 5421, a 3277, a 5424, and two 5444s. See Section 5 *System/3 Specification Summary* for individual unit values. SF5734 designates processing unit expansion.

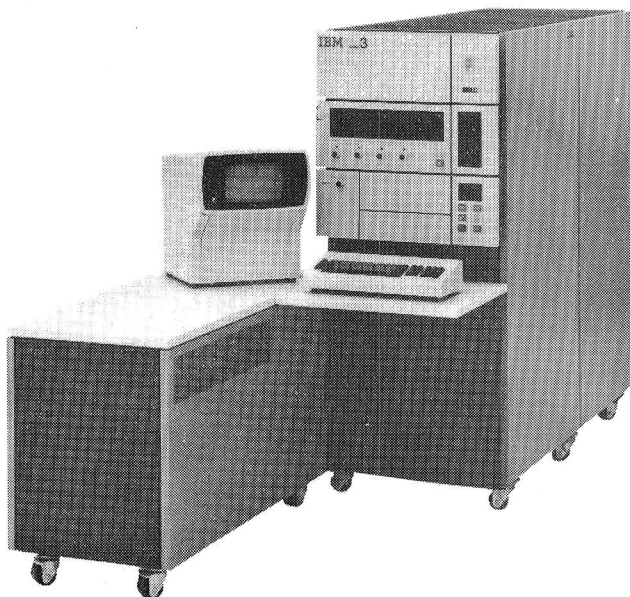


SYSTEM/3 MODEL 15 WITH IBM 5415 PROCESSING UNIT, MODELS B, C, AND D

Plan View



- A** For cables from 1403.
- B** For cables from 3411.
- C** For cables from 1442, 3741, data sets, and local directly-attached (that is, without data set or modem) communication devices.
- D** For cables from 2501, 2560, and 3340.



Specifications

Dimensions:*

	Width	Depth	Height
Inches	43	114-1/2	60
Centimeters	109	291	152

Service Clearance:

	Front	Rear	Right	Left
Inches	24	0	48	30
Centimeters	61	0	122	76

Weight:**

1800 lb (820 kg)

Heat Output/hr:**
With SF5734

17,025 Btu (4410 kcal)
20,025 Btu (5110 kcal)

Airflow/min:

1000 ft³ (28 m³)

Power Requirement:

Voltage	208/230 ± 10%
kVa**	5.7
With SF5734	6.8
Phases	3
Plug Type	D
Power cord style	B1

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	73° F (23° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* Units are separated for shipment. See *Shipping Dimensions* in Section 1 for further information. When the system includes a 5424, see the plan view under *System/3 Model 15 with IBM 5424 MFCU* in this section for dimensions.

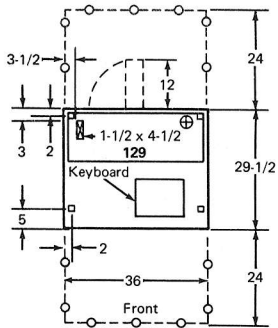
** Values for a system consisting of a 5415, a 5421, and a 3277. See *Summary of Specifications* for individual unit values. SF5734 designates processing unit expansion.

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Section 3. Machine Specifications

129 CARD DATA RECORDER

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	36	29-1/2	38
Centimeters	91	75	97

Service Clearances:

	Front	Rear	Right	Left
Inches	24	24	0	0
Centimeters	61	61	0	0

Weight:

255 lb (120 kg)

Heat Output/hr:

850 Btu (220 kcal)

Power Requirements:

Voltage	115/208/230 ± 10%
kVa	0.4
Phases	1

	115V	208/230V
Plug Type	H, J*	K, L*
Power cord style	A2	A2

Operating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	10% to 80%
Maximum wet bulb	85° F (29° C)

Nonoperating Environment:

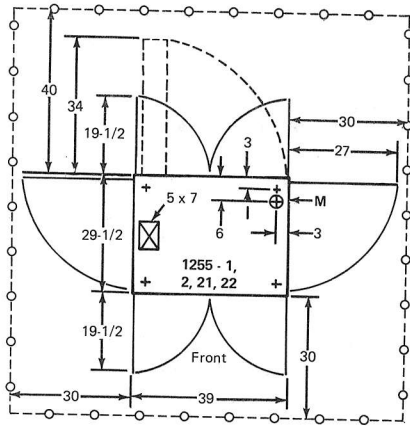
Temperature	50° to 125° F (10° to 51° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

* Locking type.

**1255 MAGNETIC CHARACTER READER MODELS
1, 2, 21, AND 22**

(Models 21 and 22 not offered in U.S. A.)

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	39	29-1/2	55
Centimeters	99	75	140

Service Clearances:

	Front	Rear	Right	Left
Inches	30	40	30	30
Centimeters	76	102	76	76

Weight: 560 lb (255 kg)

Heat Output/hr: 2600 Btu (650 kcal)

Airflow/min: 300 ft³ (8 m³)

Power Requirements:

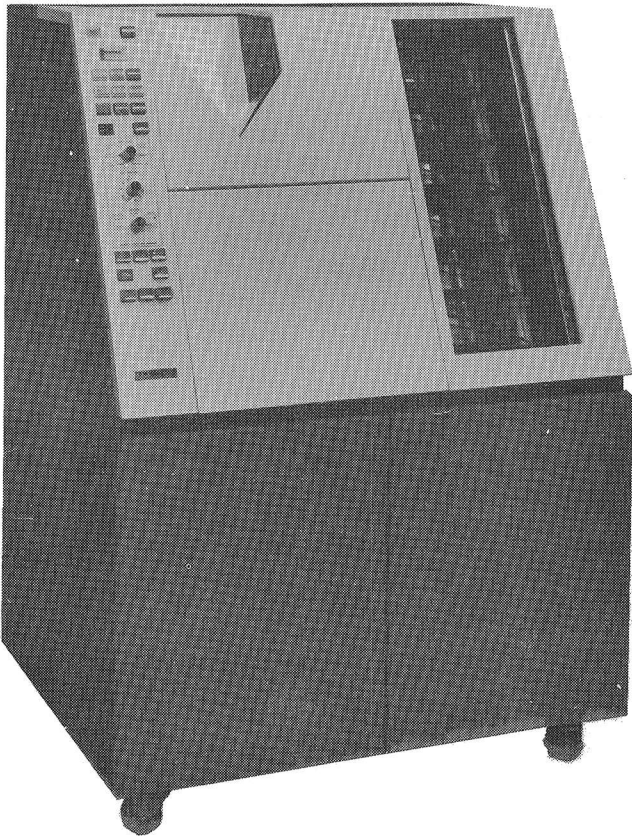
Voltage	208/230 ± 10%
kVA	1.0
Phases	1
Plug type	A
Power cord style	A1

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

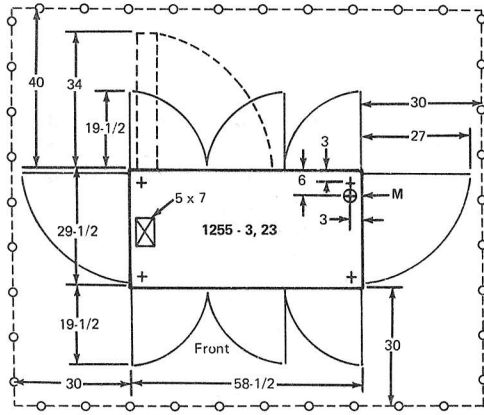
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)



1255 MAGNETIC CHARACTER READER MODELS 3 AND 23

(Models 23 not offered in U.S.A.)

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	58-1/2	29-1/2	55
Centimeters	149	75	140

Service Clearances:

	Front	Rear	Right	Left
Inches	30	40	30	30
Centimeters	76	102	76	76

Weight: 700 lb (320 kg)

Heat Output/hr: 2600 Btu (650 kcal)

Airflow/min: 300 ft³ (8 m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA	1.0
Phases	1
Plug type	A
Power cord style	A1

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

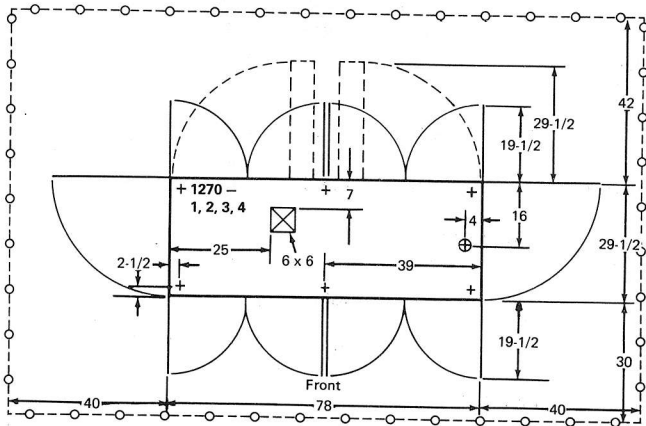
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)



1270 OPTICAL READER SORTER MODELS 1, 2, 3 AND 4

(Not offered in U.S.A.)

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	78	29-1/2	55
Centimeters	198	75	140

Service Clearances:

	Front	Rear	Right	Left
Inches	30	42	40	40
Centimeters	76	107	102	102

Weight: 1430 lb (650 kg)

Heat Output/hr: 8000 Btu (2000 kcal)

Airflow/min: 400 ft³ (10 m³)

Power Requirements:

kVA	3.0
Phases	3
Power cord style	B1

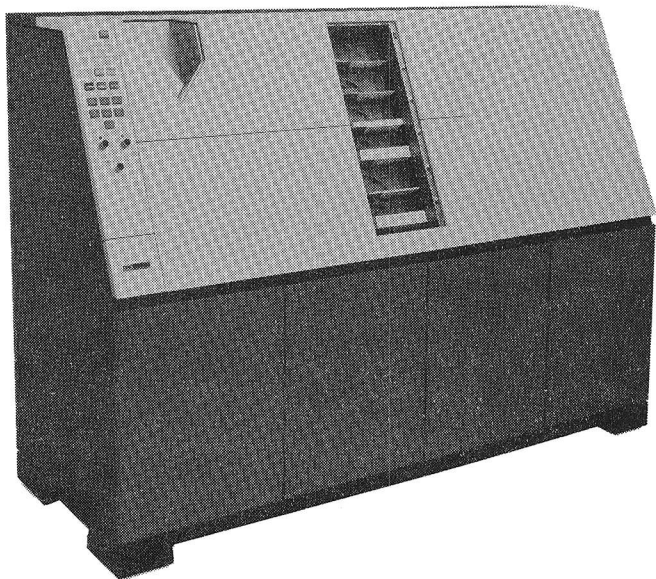
Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%*
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

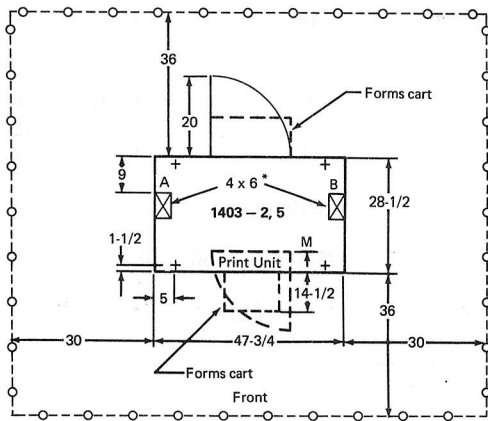
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* Paper documents used in the 1270 should not exceed 65% equivalent relative humidity.



1403 PRINTER MODELS 2 AND 5

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	47-3/4	28-1/2	53-1/4
Centimeters	121	72	135

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	30	30
Centimeters	91	91	76	76

Weight:

750 lb (340 kg)

Heat Output/hr:

3000 Btu (750 kcal)

Airflow/min:

310 ft³ (9 m³)

Power Requirements:**

kVA 1.0

Operating Environment:

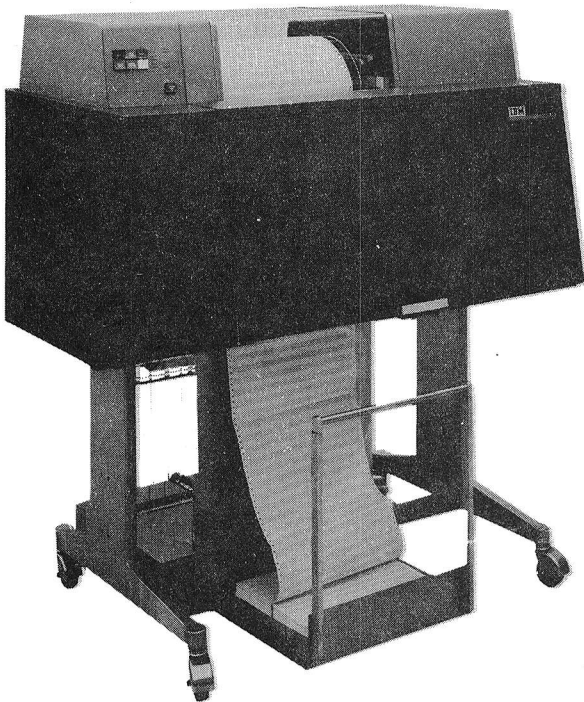
Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

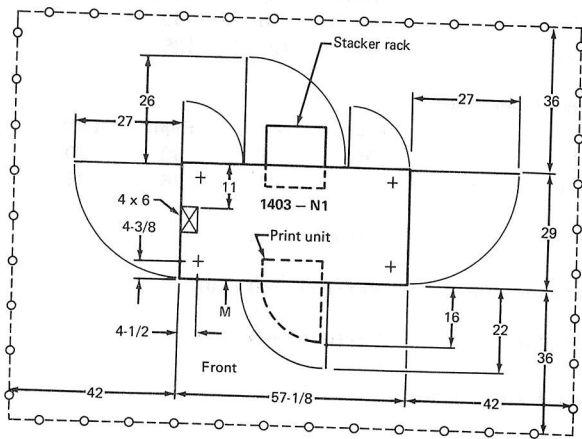
* Cable may be routed to printer at either entry point A or B. Cable length is always measured to entry point A.

** Powered from 5421.



1403 PRINTER MODEL N1

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	57-1/8	29	53-1/2
Centimeters	145	74	136

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	42	42
Centimeters	91	91	107	107

Weight: 1250 (570 kg)

Heat Output/hr: 4500 Btu (1130 kcal)

Airflow/min: 350 ft³ (10 m³)

Power Requirements:*

kVA 1.5

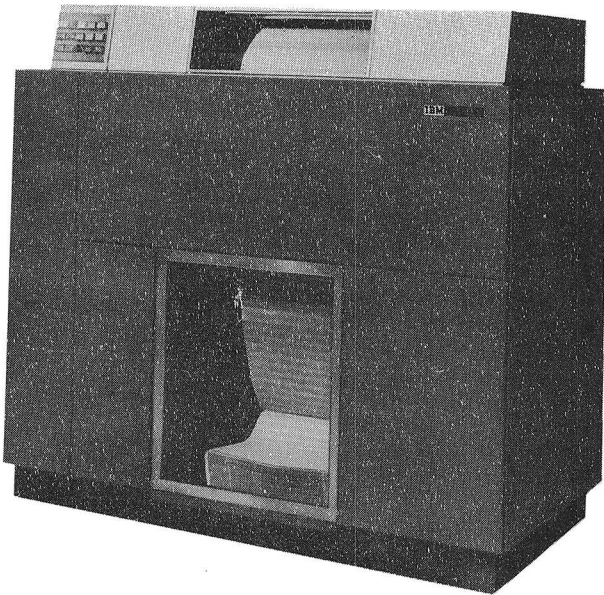
Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

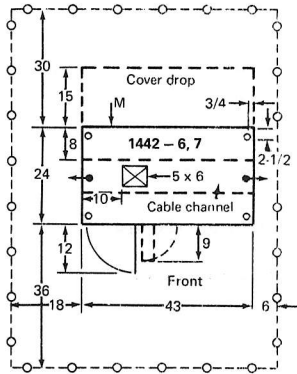
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* Powered from 5421.



1442 CARD READ PUNCH MODELS 6 AND 7

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	43	24	49
Centimeters	109	61	124

Service Clearances:

	Front	Rear	Right	Left*
Inches	36	30	6	18
Centimeters	91	76	15	46

Maximum Weight: 520 lb (240 kg)

Heat Output/hr: 1800 Btu (450 kcal)

Airflow/min: 50 ft³ (1.4 m³)

Power Requirements:**

kVA 0.7

Operating Environment:

Temperature 60° to 90°F (16° to 32°C)
 Relative humidity 20% to 80%
 Maximum wet bulb 78°F (26°C)

Nonoperating Environment:

Temperature 50° to 110°F (10° to 43°C)
 Relative humidity 8% to 80%
 Maximum wet bulb 80°F (27°C)

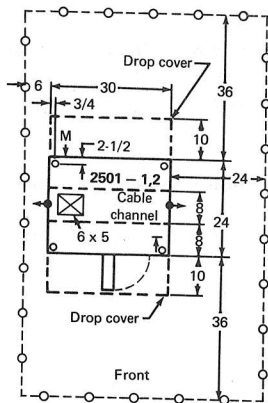
* Left service clearance not required from floor level to 30 inches (76 cm) above the floor.

** Powered from the processing unit.



2501 CARD READER MODELS A1 AND A2

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	30	24	45
Centimeters	77	61	115

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	24	6
Centimeters	91	91	61	15

Weight:

340 lb (155 kg)

Heat Output/hr:

700 Btu (180 kcal)

Airflow/min:

50 ft³ (1.4 m³)

Power Requirements:*

kVA 0.3

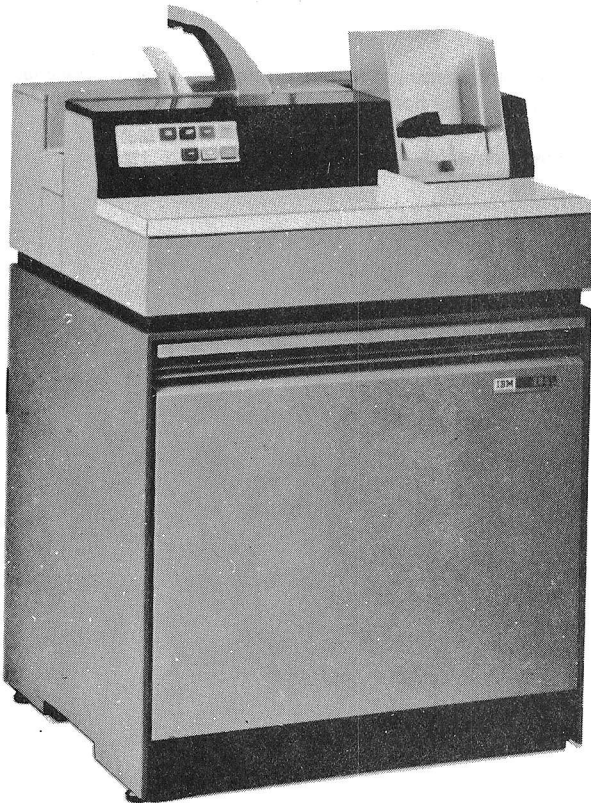
Operating Environment:

Temperature 50° to 90° F (10° to 32° C)
 Relative humidity 20% to 80%
 Maximum wet bulb 78° F (26° C)

Nonoperating Environment:

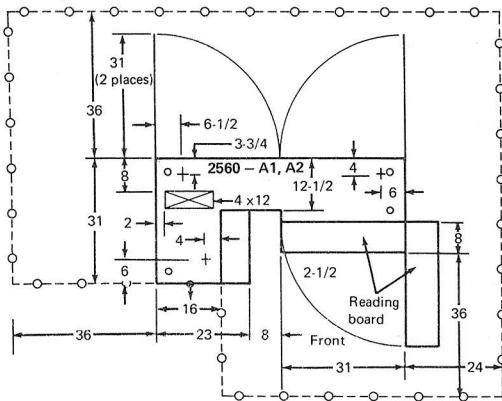
Temperature 50° to 110° F (10° to 43° C)
 Relative humidity 8% to 80%
 Maximum wet bulb 80° F (27° C)

* Powered from the processing unit.



**2560 MULTI-FUNCTION CARD MACHINE MODELS
A1 AND A2**

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	62	31	44
Centimeters	157	79	112

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	24	36
Centimeters	91	91	61	91

Weight: 875 lb (400 kg)

Heat Output/hr: 3600 Btu (910 kcal)

Airflow/min: 100 ft³ (3 m³)

Power Requirements:*

kVA 1.3

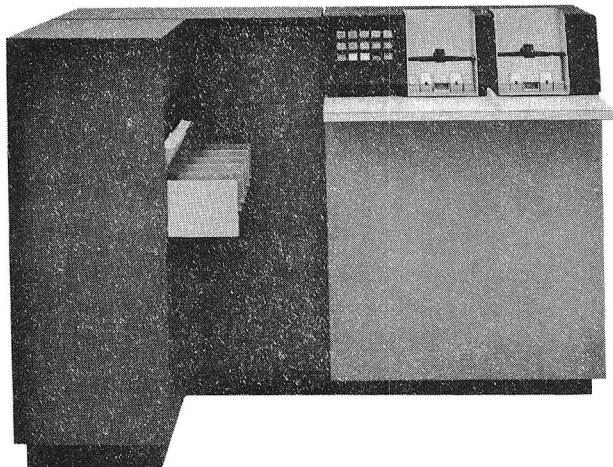
Operating Environment:

Temperature 50° to 90° F (10° to 32° C)
 Relative humidity 20% to 80%
 Maximum wet bulb 78° F (26° C)

Nonoperating Environment:

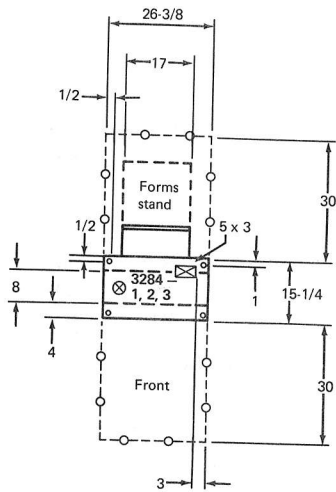
Temperature 50° to 110° F (10° to 43° C)
 Relative humidity 8% to 80%
 Maximum wet bulb 80° F (27° C)

* Powered from processing unit.

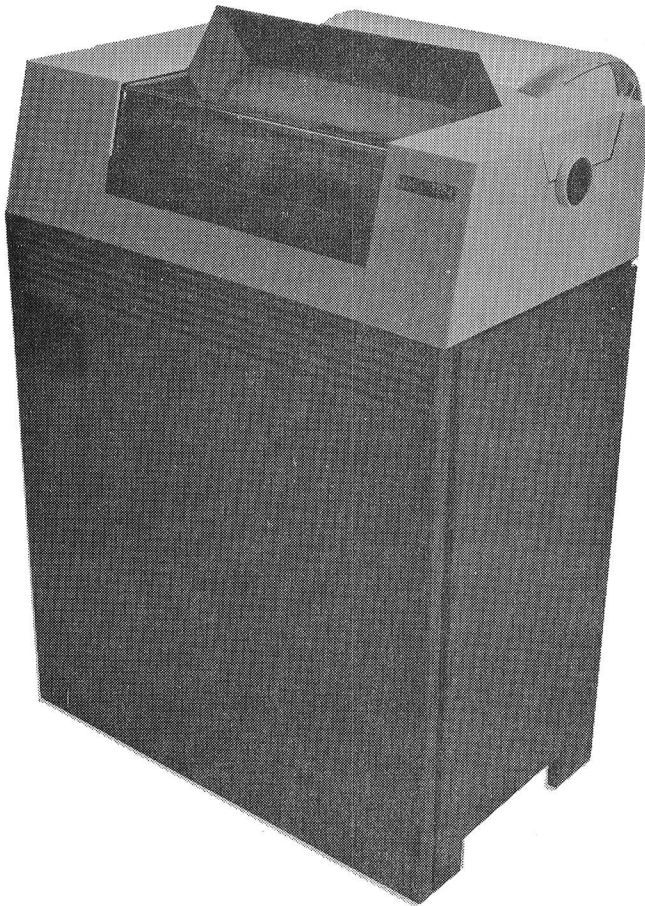


3284 PRINTER MODELS 1, 2, AND 3

Plan View



A six inch clearance between forms stand and printer is recommended.



Specifications

Dimensions:

	Width	Depth	Height
Inches	26-3/8	15-1/4	37-3/4
Centimeters	67	39	96

Service Clearances:

	Front	Rear	Right	Left
Inches	30	30*	0	0
Centimeters	76	76*	0	0

Weight: 135 lb (65 kg)

Heat Output/hr: 770 Btu (200 kcal)

Airflow/min: Convection only

Power Requirements:*

kVA 0.3

Operating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

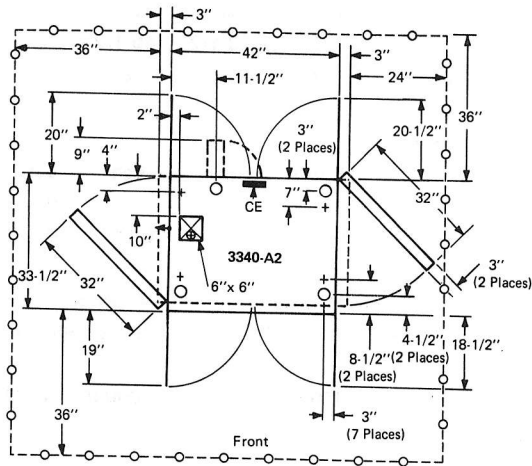
Nonoperating Environment:

Temperature	50° to 125° F (10° to 52° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

* Powered from processing unit.

3340 DISK STORAGE MODEL A2

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	42*	33-1/2	46-1/2
Centimeters	114*	85	118

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	0**	36
Centimeters	91	91	0**	91

Weight (Maximum): 900 lb (410 kg)

Heat Output/hr: 6500 Btu (1650 kcal)

Airflow/min: 400 ft³ (12 m³)

Power Requirements:

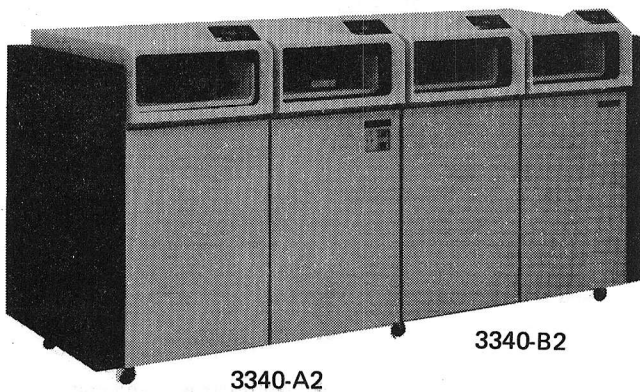
Voltage	208/230 ± 10%
kVA	2.2
Phases	3
Plug Type	D
Power cord style	D2

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

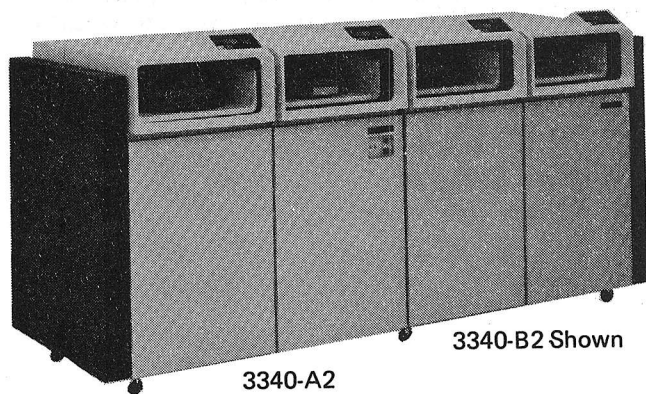
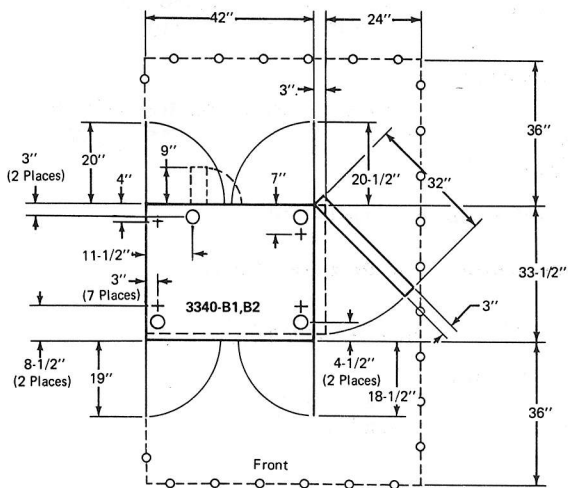


* The stand alone dimension is 48 inches (122 cm) with a 3-inch (8-cm) end cover added. One 3340-B1 or one 3340-B2 can be attached to the right side of a 3340-A2.

** Service clearance is 24 inches (61 cm) if a 3340-B1 or 3340-B2 is not attached.

3340 DISK STORAGE MODELS B1 AND B2

Plan View



Specifications

Dimensions

	Width	Depth	Height
Inches	42*	33-1/2	46-1/2
Centimeters	107*	85	118

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	0**	0
Centimeters	91	91	0**	0

	Model B1	Model B2
Weight (Maximum)	600 lb (280 kg)	750 lb (350 kg)

	Model B1	Model B2
Heat Output/hr:	3500 Btu (890 kcal)	5000 Btu (1300 kcal)

	Model B1	Model B2
Airflow/min:	400 ft ³ (12 m ³)	400 ft ³ (12 m ³)

Power Requirements: ***

	Model B1	Model B2
kVA	1.2	1.7
Phases	3	3

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

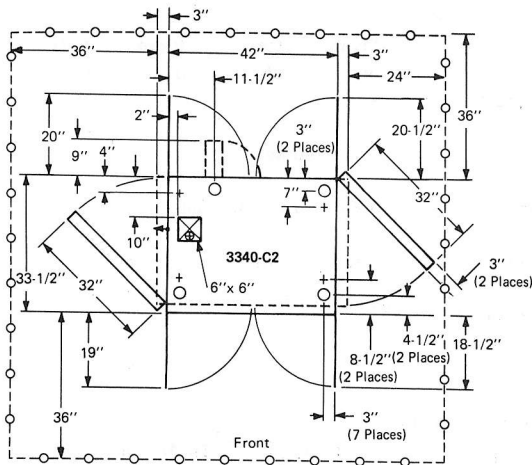
*The end unit dimensions is 45 inches (114 cm) with a 3-inch (8 cm) cover added.

** Service clearance is 24 inches (61 cm) if this is an end unit.

*** Powered from 3340-A2

3340 DISK STORAGE MODEL C2

Plan View



Specifications

Dimensions

	Width	Depth	Height
Inches	48	33-1/2	46-1/2
Centimeters	122	85	118

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	24	36
Centimeters	91	91	61	91

Weight (Maximum) 900 lb (410 kg)

Heat Output/hr: 5000 Btu (1300 kcal)

Airflow/min: 400 ft³ (12 m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA	1.8
Phases	3
Plug Type	B
Power cord style	D2

Operating Environment:

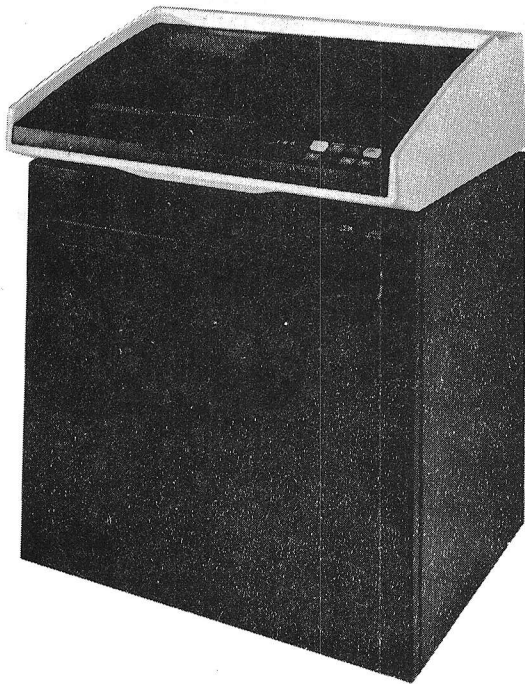
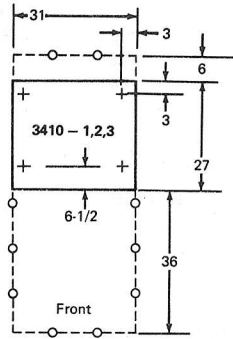
Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

3410 MAGNETIC TAPE UNIT MODELS 1, 2, AND 3

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	31	27	39
Centimeters	79	69	99

Service Clearances:

	Front	Rear	Right	Left
Inches	36	6	0*	0*
Centimeters	91	15	0*	0*

Weight: 180 lb (80 kg)

Heat Output/hr: 850 Btu (220 kcal)

Airflow/min: 60 ft³ (2 m³)

Power Requirements:**

kVA 0.3

Operating Environment:

Temperature 60° to 90° F (16° to 32° C)
 Relative humidity 20% to 80%
 Maximum wet bulb 78° F (26° C)

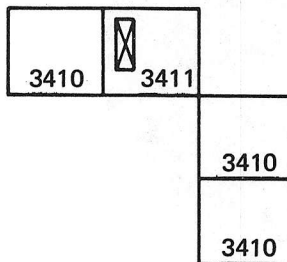
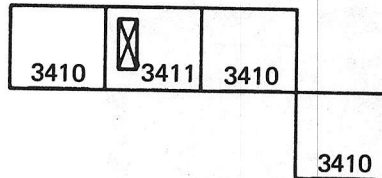
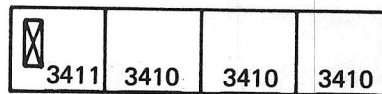
Nonoperating Environment:

Temperature 50° to 110° F (10° to 43° C)
 Relative humidity 8% to 80%
 Maximum wet bulb 80° F (27° C)

* The 3410 can be attached to either side of the 3411, with a maximum of three units on a side.

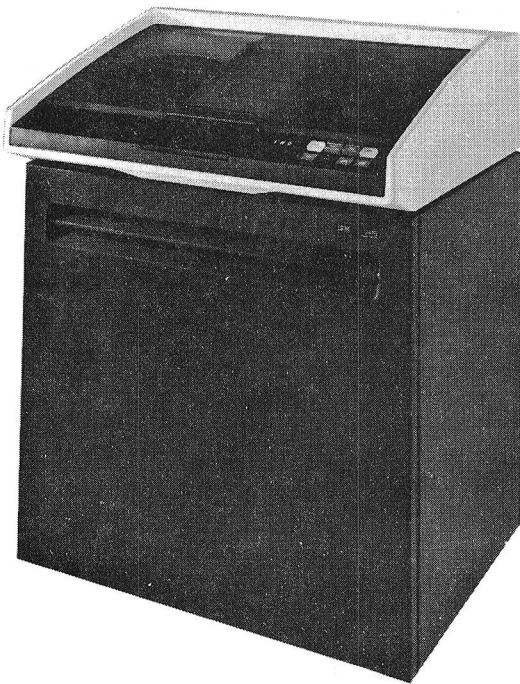
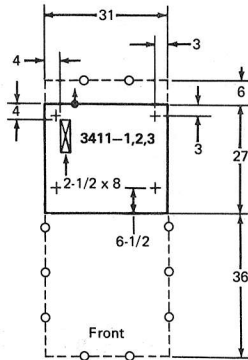
** Powered from 3411.

Typical Tape Unit Layouts



3411 MAGNETIC TAPE UNIT AND CONTROL MODELS 1, 2, AND 3

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	31	27	39
Centimeters	79	69	99

Service Clearances:

	Front	Rear	Right	Left
Inches	36	6	0*	0*
Centimeters	91	15	0*	0*

Weight: 325 lb (150 kg)

Heat Output/hr: 3500 Btu (880 kcal)

Airflow/min: 200 ft³ (6 m³)

Power Requirements:

Voltage	208/230 ± 10%	
kVA	60 Hz All Models and 50 Hz Model 1	50 Hz Models 2, 3
Phases	1.2	1.2
Plug Type	1	3
Power cord style	C	---
	A2	D2

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

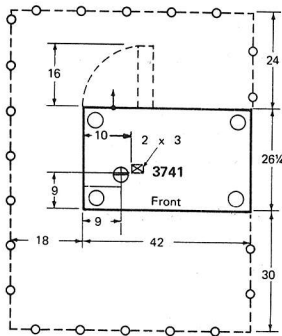
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* The 3410 can be attached to either side of the 3411, with a maximum of three units on a side. The 3411 Model 1 can have up to three 3410s attached (total capability of four tape units).

All units are physically attached at the front corner, allowing up to 90° swing between units.

**3741 DATA STATION MODELS 1 AND 2
3741 PROGRAMMABLE WORK STATION MODELS 3 AND 4**

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	42	26-1/4	34
Centimeters	107	67	87

Service Clearances:

	Front	Rear	Right	Left
Inches	30	24	0	18
Centimeters	76	61	0	46

Weight (Maximum): 240 lb (109 kg)

Heat Output/hr: 700 Btu (180 kcal)

Airflow/min: 150 ft³ (4 m³)

Power Requirements:

Voltage	115/208/230 ± 10%
kVA	0.4
Phases	1

	115V	208/230V
Plug Type	H, J*	K, L*
Power cord style	A5	A5

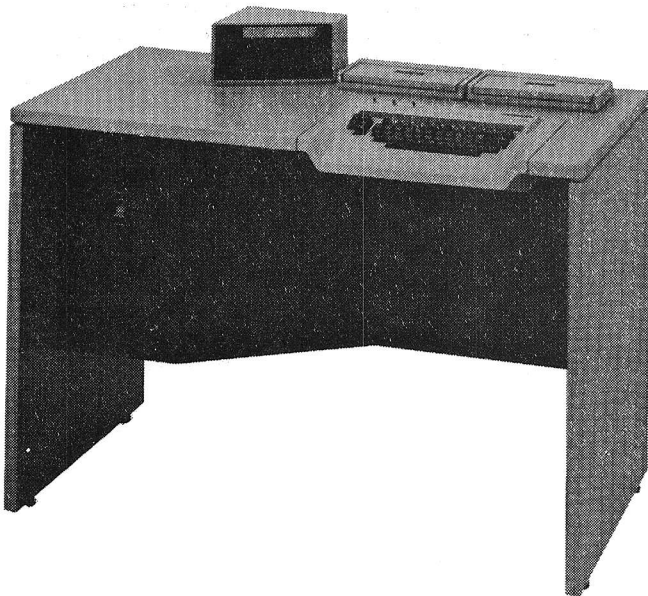
Operating Environment:

Temperature	60° to 90°F (16° to 32°C)
Relative humidity	8% to 80%
Maximum wet bulb	78°F (26°C)

Nonoperating Environment:

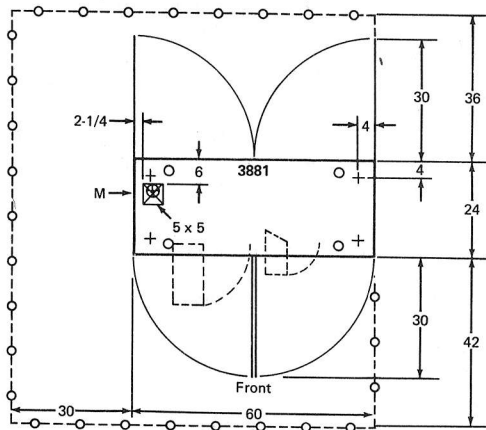
Temperature	50° to 110°F (10° to 43°C)
Relative humidity	8% to 80%
Maximum wet bulb	80°F (27°C)

* Locking type.



3881 OPTICAL MARK READER MODEL 1

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	60	24	55
Centimeters	152	61	140

Service Clearances:

	Front	Rear	Right	Left
Inches	42	36	0	30
Centimeters	107	91	0	76

Weight:

875 lb (400 kg)

Heat Output/hr:

3500 Btu (880 kcal)

Airflow/min:

25 ft³ (0.7 m³)

Power Requirements:

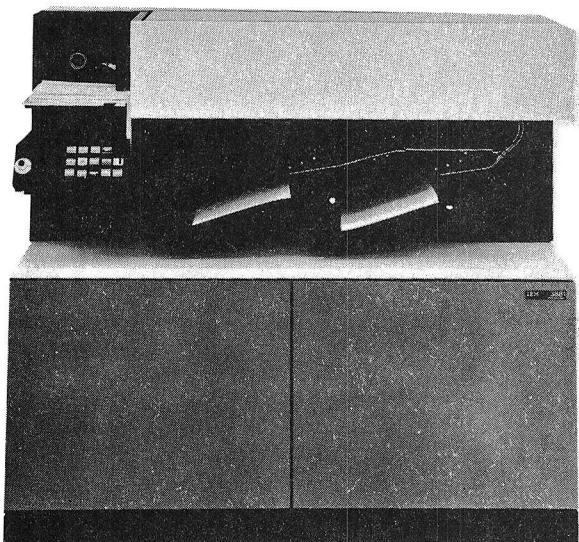
Voltage	208/230 ± 10%
kVA	1.2
Phases	1
Plug Type	C
Power cord style	A2

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	20% to 80%
Maximum wet bulb	78° F (26° C)

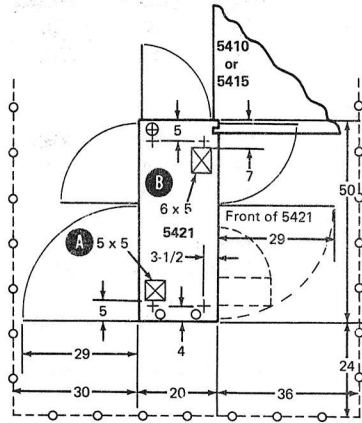
Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)



5421 PRINTER CONTROL (FOR 1403 ATTACHMENT)

Plan View



A For cables from 1403.

B For cables from 3411 and 3284.

Specifications

Dimensions:

	Width	Depth	Height
Inches	50	20	29
Centimeters	127	51	74

Service Clearances:

	Front	Rear	Right	Left
Inches	36	30	*	24
Centimeters	91	76	*	61

Weight:

405 lb (185 kg)

Heat Output/hr:

1800 Btu (550 kcal)

Airflow/min:

250 ft³ (7 m³)

Power Requirements:

Voltage	208/230 ± 10%
kVA	1.0 @ 60 Hz, 2.2 @ 50 Hz
Phases	3
Plug Type	D
Power cord style	B1

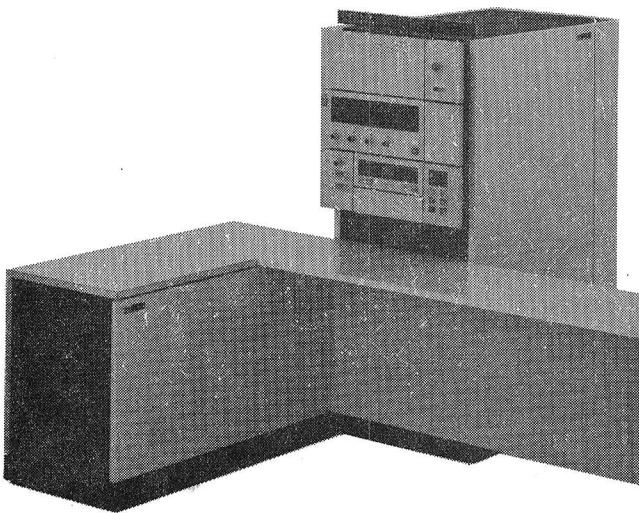
Operating Environment:

Temperature	60° to 100° F (16° to 38° C)
Relative humidity	8% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

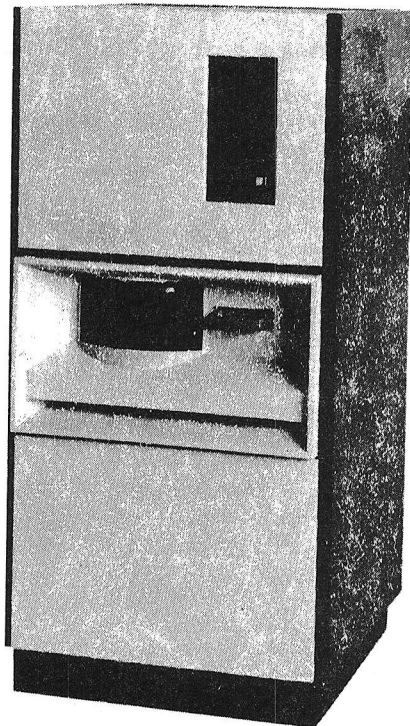
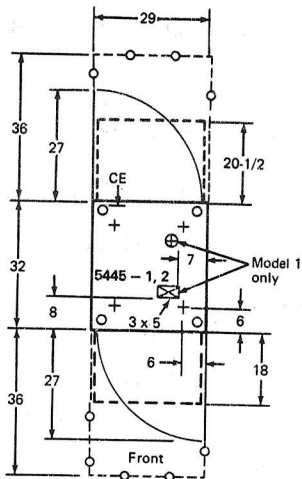
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* Right service clearance included in overall system requirements.



5445 DISK STORAGE DRIVE MODELS 1 AND 2

Plan View



Specifications

Dimensions:

	Width**	Depth	Height
Inches	29	32	60
Centimeters	74	81	151

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	0	0
Centimeters	91	91	0	0

	Model 1	Model 2
Weight (Maximum):	800 lb (370 kg)	670 lb (300 kg)
Heat Output/hr:	2800 Btu (710 kcal)	1900 Btu (480 kcal)
Airflow/min:	280 ft ³ (8 m ³)	200 ft ³ (6 m ³)

Power Requirements:

Voltage	208/230 ± 10%	*
kVA	1.0 @ 60 Hz	0.7 @ 60 Hz
	1.3 @ 50 Hz	1.0 @ 50 Hz
Phases	1	*
Plug Type	A	*
Power cord style	AB	*

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	78° F (26° C)

Nonoperating Environment:

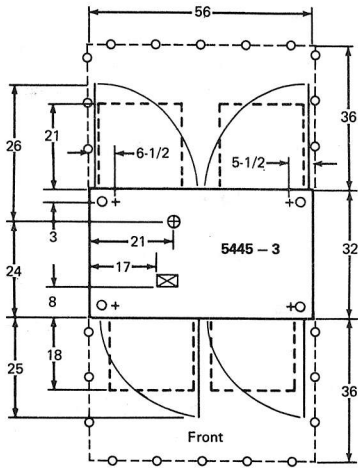
Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)

* Model 2 is powered from Model 1.

** Model 2 must be bolted to the right side of Model 1. Overall width is then 58 inches (147 cm).

5445 DISK STORAGE DRIVE MODEL 3

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	56	32	60
Centimeters	142	81	151

Service Clearances:

	Front	Rear	Right	Left
Inches	36	36	0	0
Centimeters	91	91	0	0

Weight (Maximum): 1150 lb (520 kg)

Heat Output/hr: 4700 Btu (1185 kcal)

Airflow/min: 480 ft³ (14 m³)

Power Requirements:

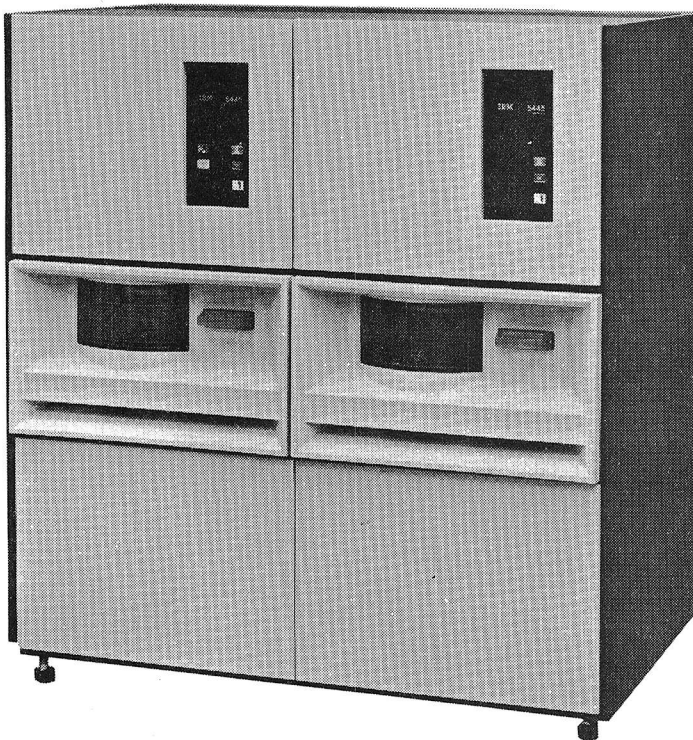
Voltage	208/230
kVA	1.7 @ 60 Hz
	2.3 @ 50 Hz
Phases	1
Plug Type	A
Power cord style	A8

Operating Environment:

Temperature	60° to 90° F (16° to 32° C)
Relative humidity	8% to 80%
Maximum wet bulb	78° F (26° C)

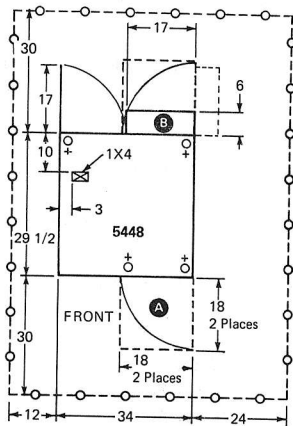
Nonoperating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	80° F (27° C)



5448 DISK STORAGE DRIVE

Plan View



A Disk storage drive is located in drawer under tabletop. Drawer can be extended 18 inches in front and 18 inches in rear for servicing.

Gate can be removed for shipment or moving.

Specifications

Dimensions:

	Width	Depth	Height
Inches	34	35-1/2	29-1/2
Centimeters	87	90	75

Service Clearances:

	Front	Rear	Right	Left
Inches	30	24	24	12
Centimeters	76	61	61	31

Weight (Maximum): 510 lb (235 kg)

Heat Output/hr: 2400 btu (605 kcal)

Airflow/min: 200 ft³ (6m³)

Power Requirements: *

kVA 0.9

Operating Environment:

Temperature	60° to 100°F (16° to 38°C)
Relative humidity	8% to 80%
Maximum wet bulb	78°F (26°C)

Nonoperating Environment:

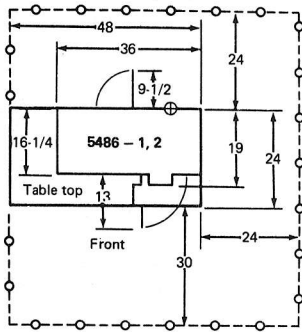
Temperature	50° to 110°F (10° to 43°C)
Relative humidity	8% to 80%
Maximum wet bulb	80°F (27°C)

* Powered from processing unit



5486 CARD SORTER MODELS 1 AND 2

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	48	24	54
Centimeters	122	61	137

Service Clearances:

	Front	Rear	Right	Left
Inches	30	24	24	0
Centimeters	76	61	61	0

Weight:* 250 lb (115 kg)

Heat Output/hr: 1150 Btu (290 kcal)

Airflow/min: 0 ft³ (0 m³)

Power Requirements:

Voltage	115 ± 10%
kVA	0.6
Phases	1
Plug Type	H
Power cord style	A5

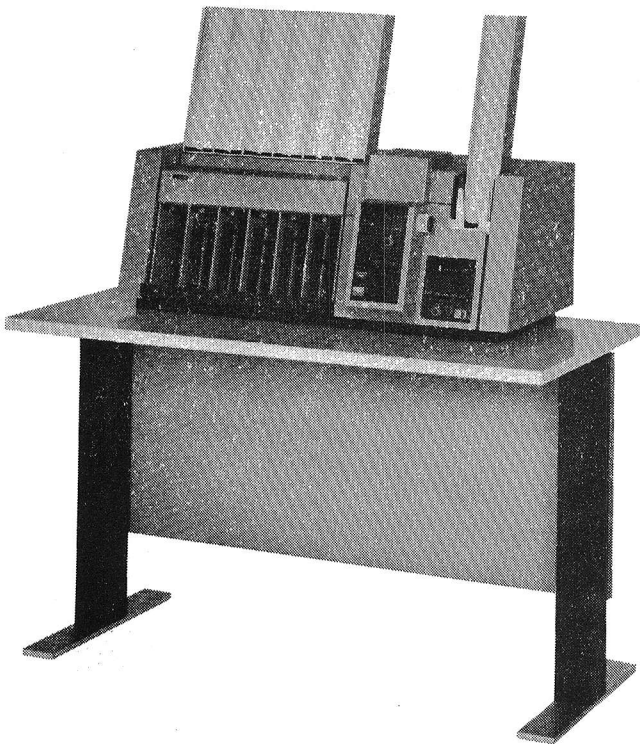
Operating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

Nonoperating Environment:

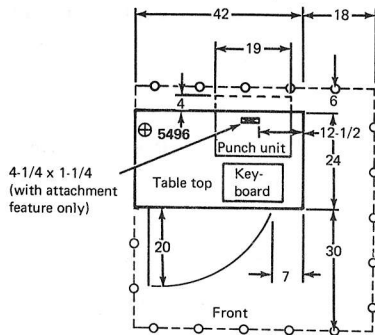
Temperature	50° to 125° F (10° to 51° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

* Data given is for sorter and table combined. Sorter weighs 145 lb (66 kg). Table weighs 105 lb (48 kg). Sorter is packed in a separate carton; it is the customer's responsibility to place the sorter on the table.



5496 DATA RECORDER MODELS 1 AND 2

Plan View



Specifications

Dimensions:

	Width	Depth	Height
Inches	42	24	37-1/2
Centimeters	107	61	95

Service Clearances:

	Front	Rear	Right*	Left
Inches	30	6	18	0
Centimeters	76	15	46	0

Weight: 250 lb (115 kg)

Heat Output/hr: 850 Btu (220 kcal) @ 60 Hz
1225 Btu (310 kcal) @ 50 Hz

Power Requirements:

Voltage	115 ± 10%
kVA	0.4 @ 60 Hz 0.6 @ 50 Hz
Phases	1
Plug Type	H
Power cord style	A5

Operating Environment:

Temperature	50° to 110° F (10° to 43° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

Nonoperating Environment:

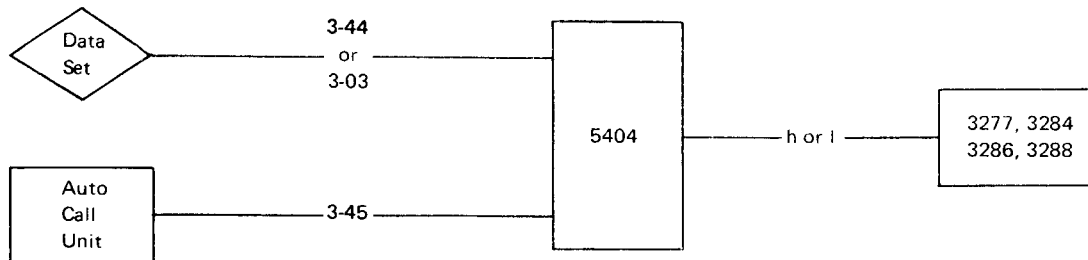
Temperature	50° to 125° F (10° to 51° C)
Relative humidity	8% to 80%
Maximum wet bulb	85° F (29° C)

* Clearance required above tabletop only.

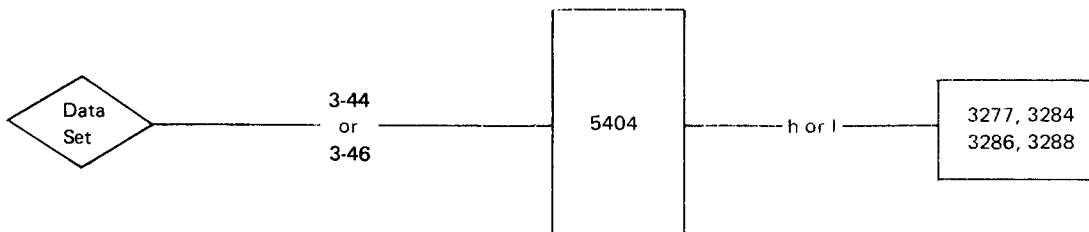


MODEL 4 CABLING SCHEMATIC

60 Hertz Systems

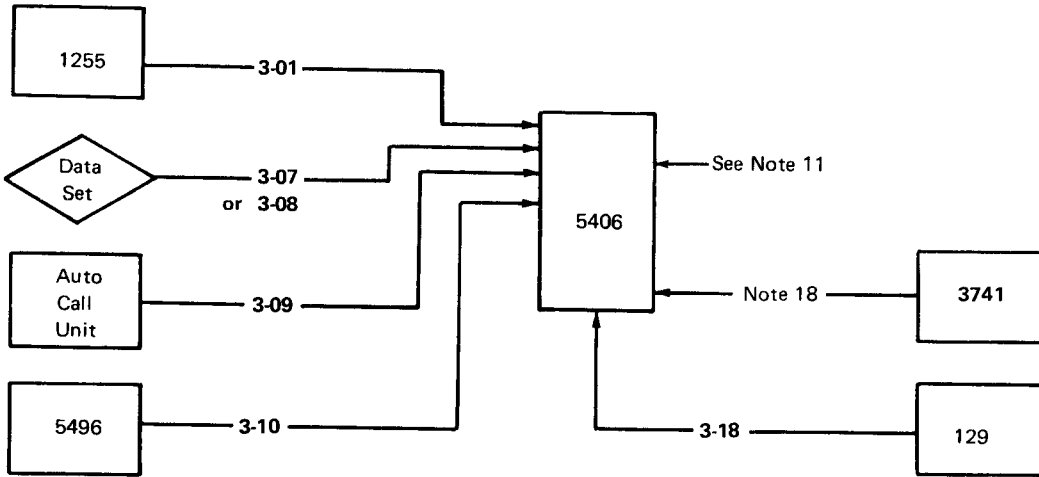


50 Hertz Systems

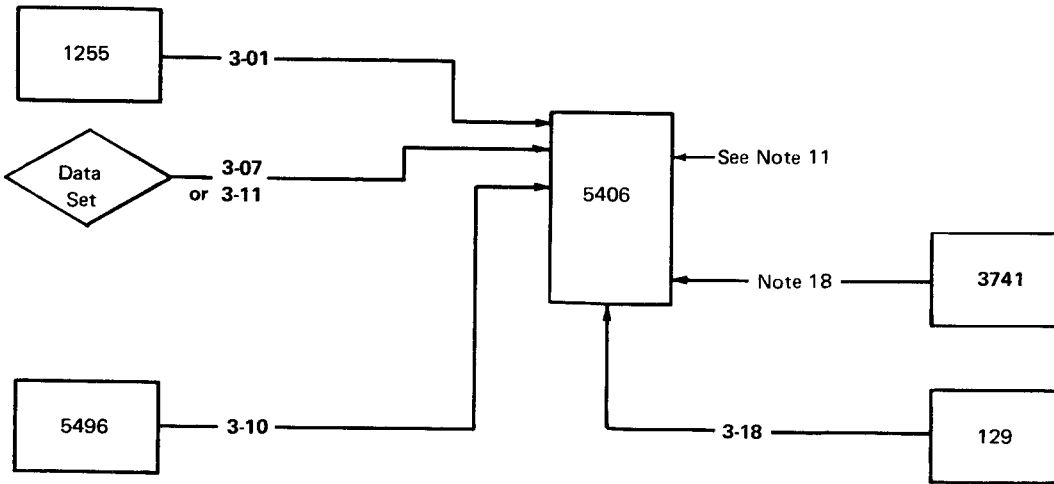


MODEL 6 CABLING SCHEMATIC

60 Hertz Systems

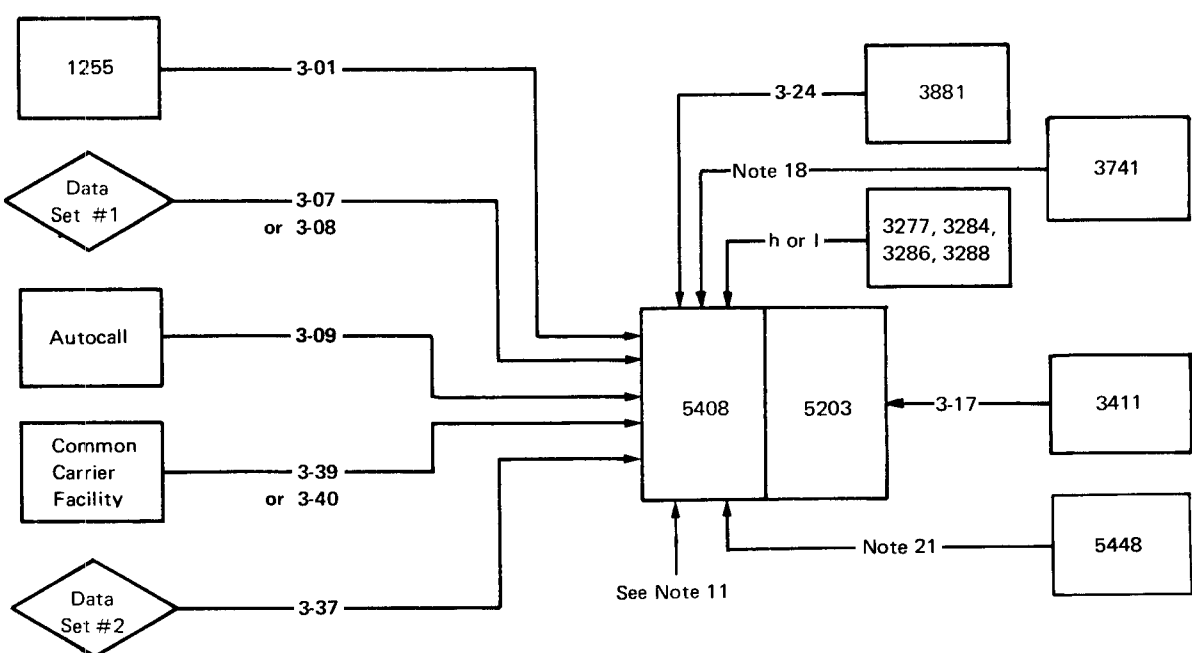


50 Hertz Systems

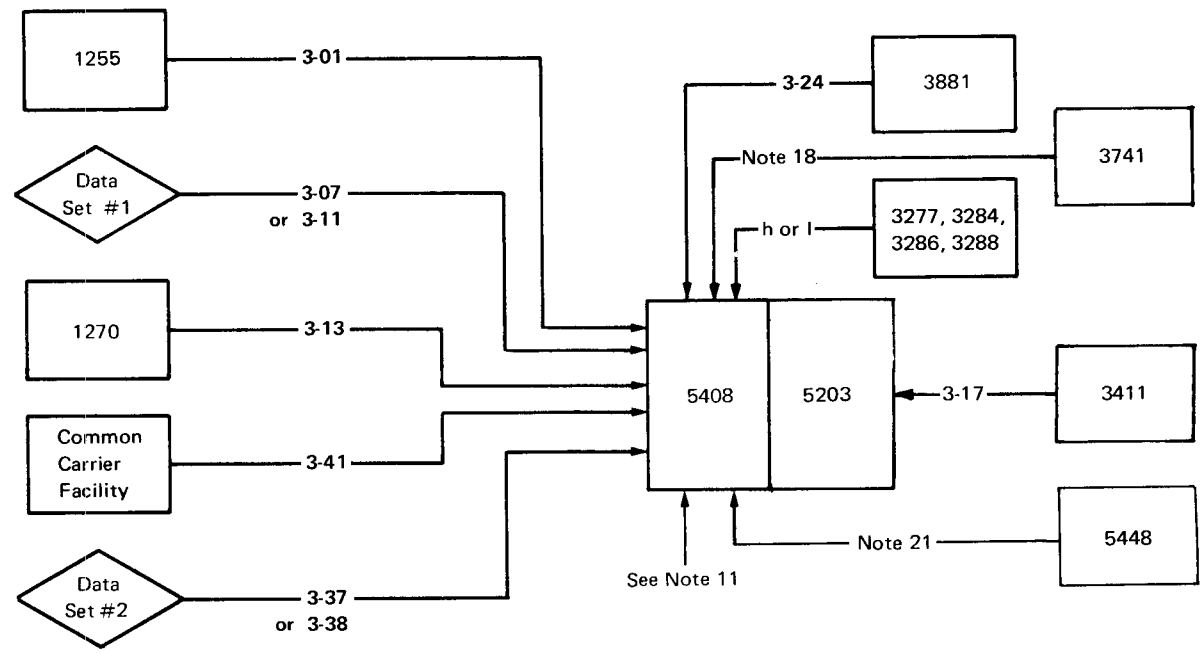


MODEL 8 CABLING SCHEMATIC

60 Hertz Systems

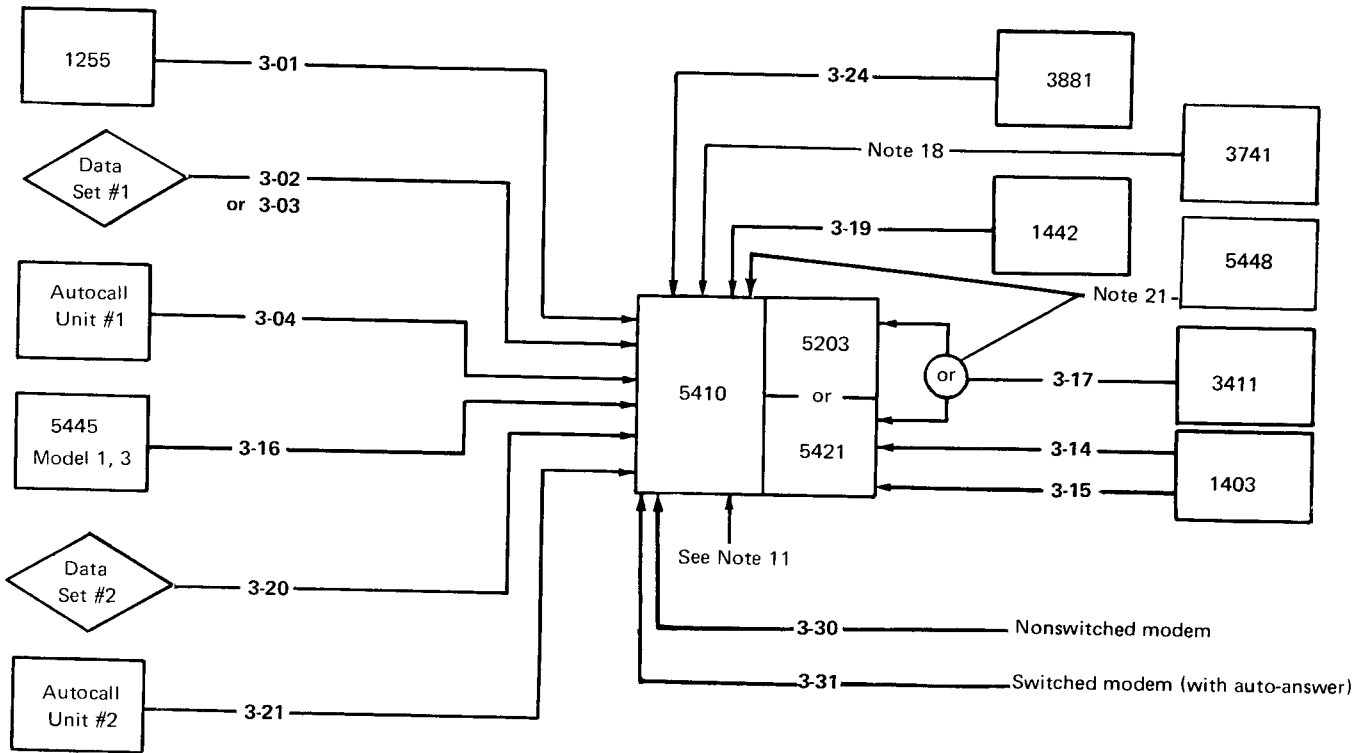


50 Hertz Systems

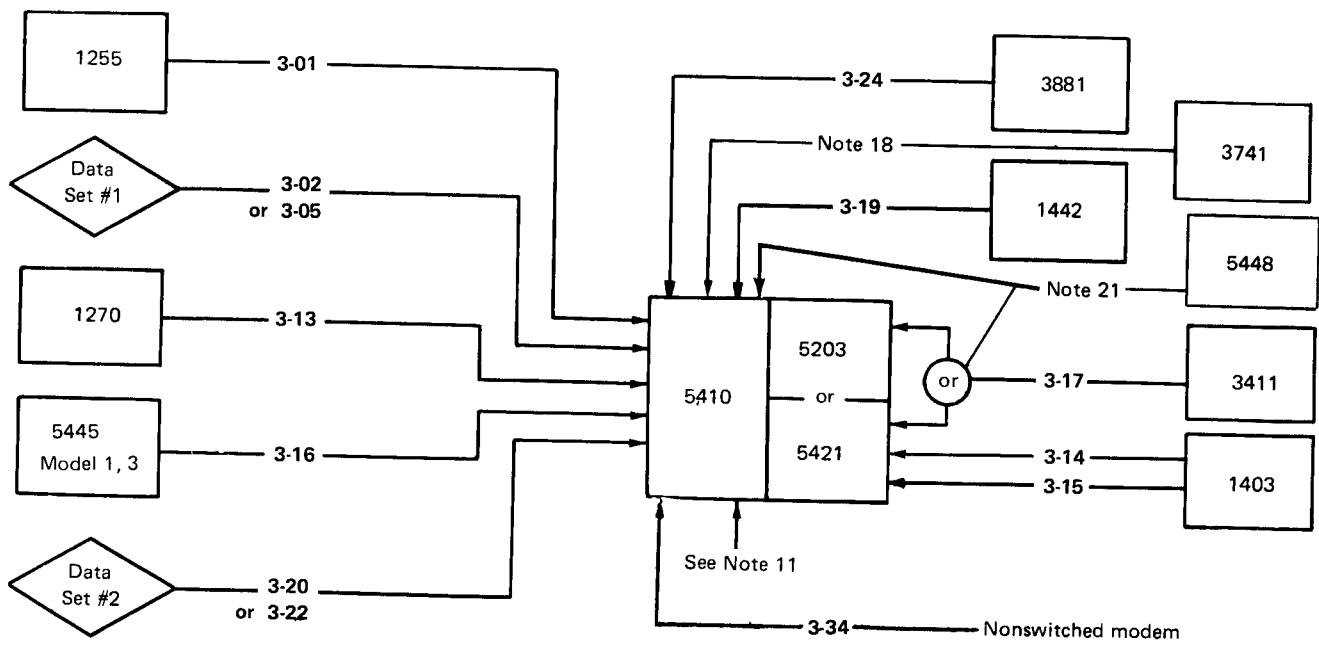


MODEL 10 CABLING SCHEMATIC

60 Hertz Systems

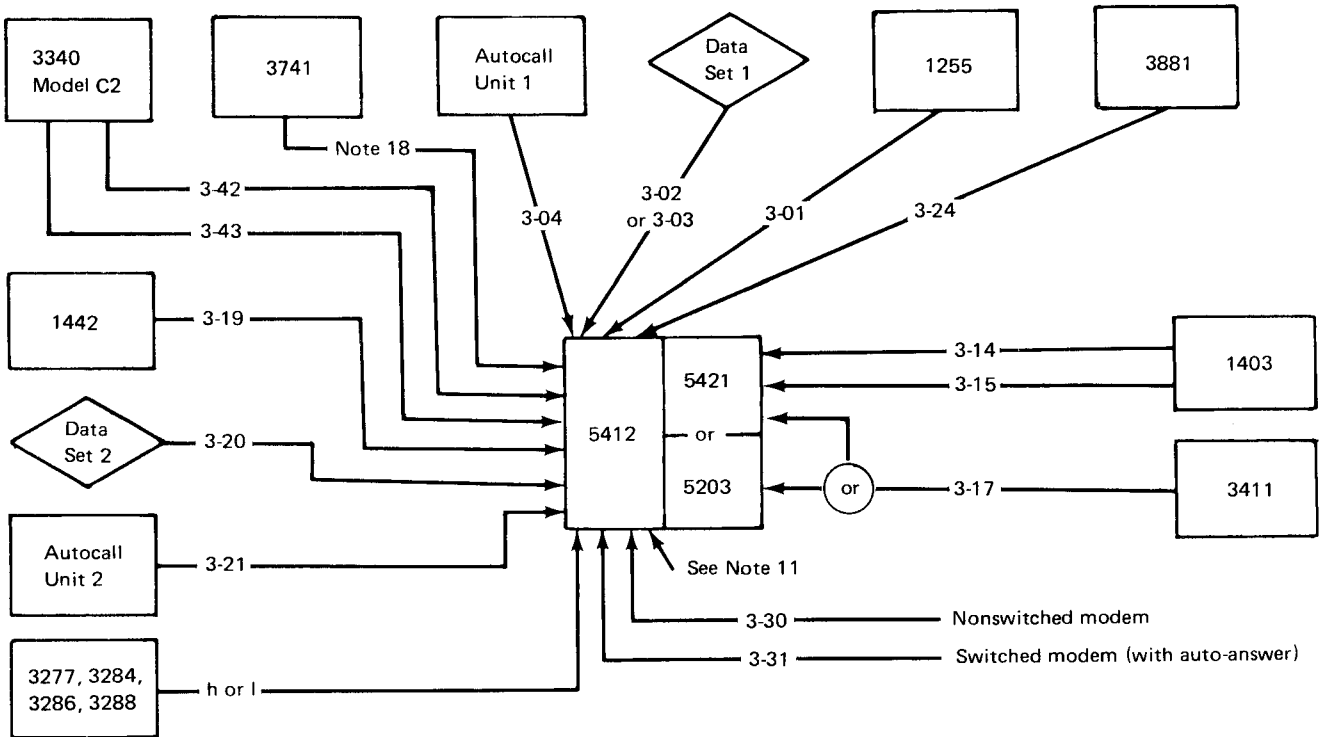


50 Hertz Systems

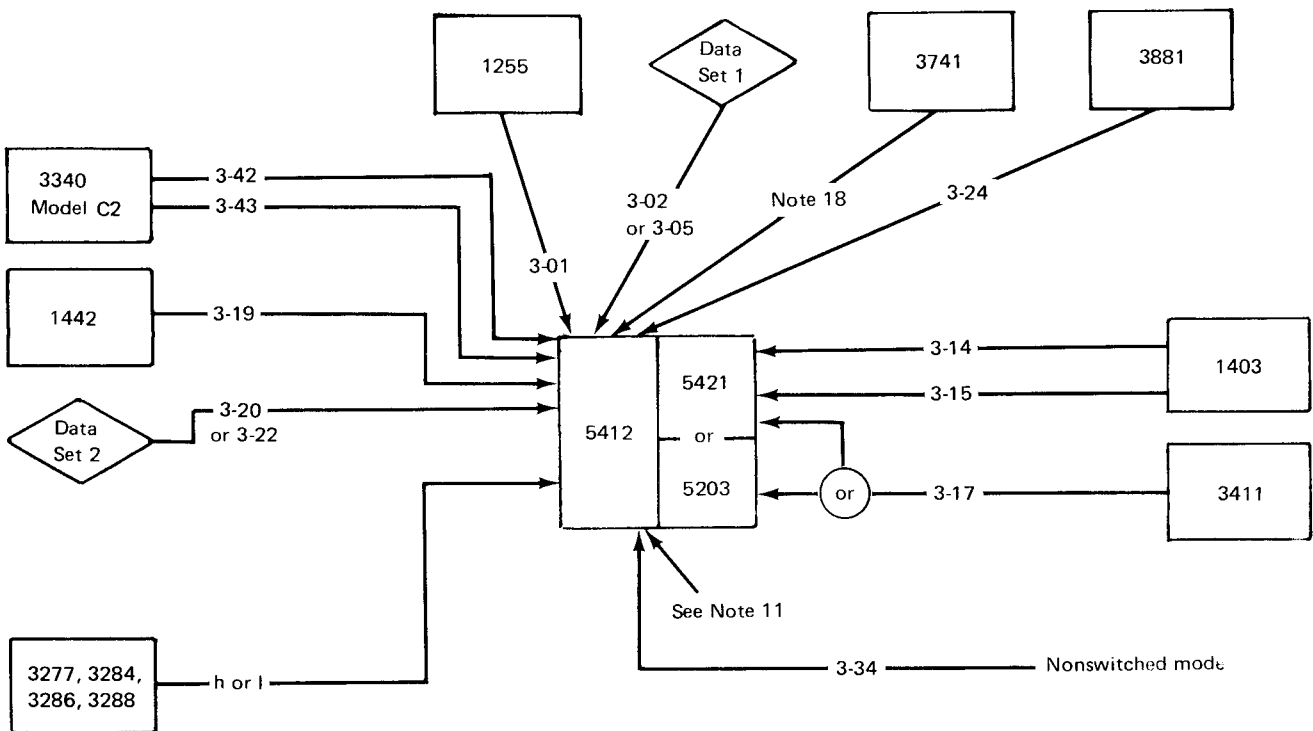


MODEL 12 CABLING SCHEMATIC

60 Hertz Systems

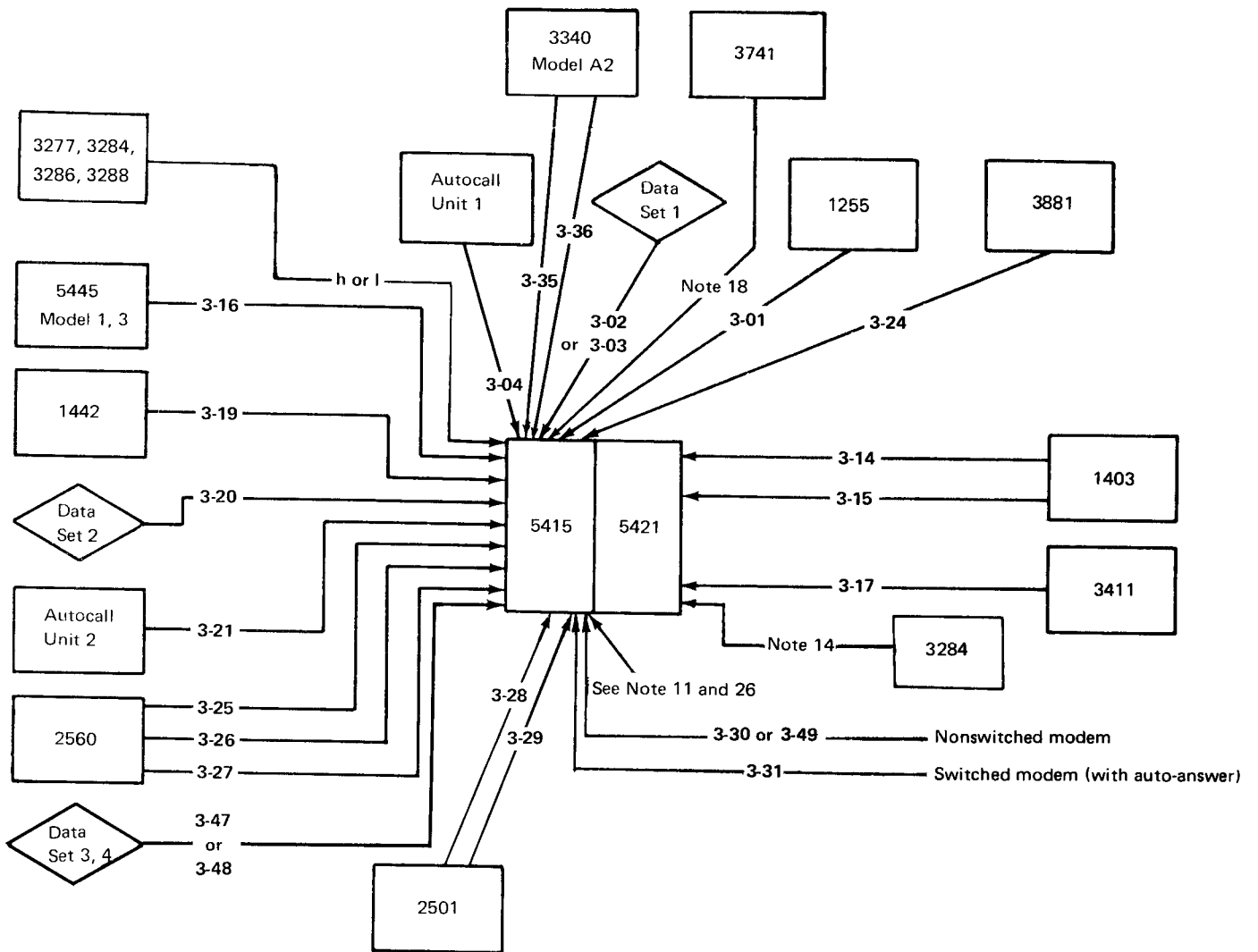


50 Hertz Systems

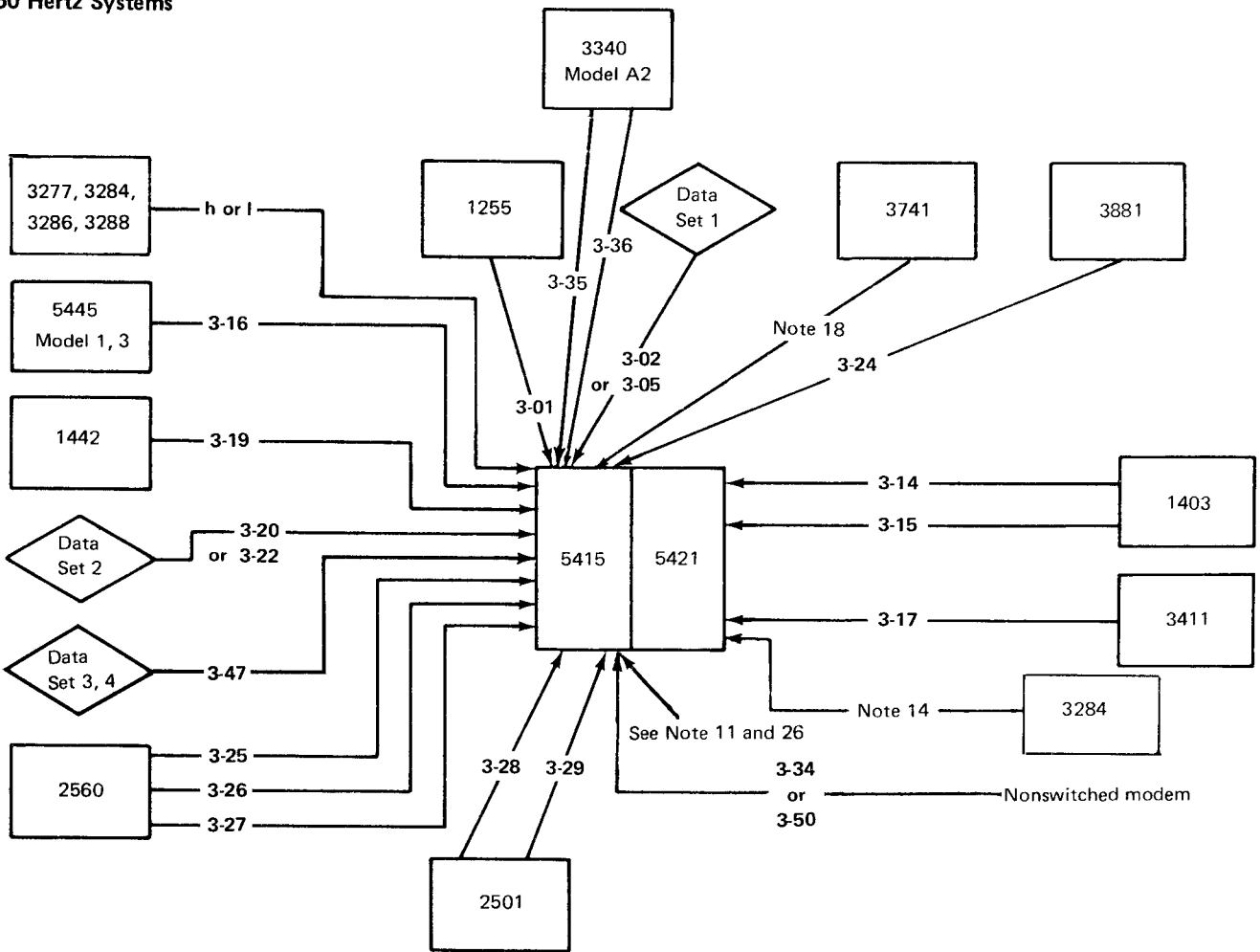


MODEL 15 CABLING SCHEMATIC

60 Hertz Systems



50 Hertz Systems



CABLING SUMMARY CHART

This chart summarizes the cabling information for all models of System/3 and their attached units. (Use the blank spaces at the bottom of the chart to record new cabling information supplied by technical newsletters to this manual. Use the blank spaces below the cabling notes to add cabling notes supplied by technical newsletter.)

Cable Group Number	Number of Cables	From	5404	5406	5408	5410	5412	5415	Other	Maximum Length (feet)	Notes
3-01	1	1255		✓	✓	✓	✓	✓		40	
3-02	1	Data set 1				✓	✓	✓		30	1(a,c), 2
3-03	1	Data set 1	✓			✓	✓	✓		40	1(b), 3
3-04	1	Autocall unit 1				✓	✓	✓		30	1(a), 4
3-05	1	Data set 1				✓	✓	✓		30	1(c), 5
3-07	1	Data set		✓	✓					30	1(a,c), 2
3-08	1	Data set		✓	✓					30	1(b), 3
3-09	1	Autocall unit		✓	✓					30	1(a), 4
3-10	1	5496-1, -2		✓	✓					25	
3-11	1	Data set		✓	✓					30	1(c), 5
3-13	1	1270			✓	✓				40	
3-14	2	1403				*	*	*	5421	25	
3-15	1	1403				*	*	*	5421	25	
3-16	2	5445-1, -3				✓		✓		25	6
3-17	3	3411			*	*	*	*	5203, 5421	30	
3-18	1	129		✓						25	
3-19	2	1442				✓	✓	✓		25	
3-20	1	Data set 2				✓	✓	✓		30	1(a,c), 7
3-21	1	Autocall unit 2				✓	✓	✓		30	1(a), 8
3-22	1	Data set 2				✓	✓	✓		30	1(c), 9
3-24	1	3881-1			✓	✓	✓	✓		40	
3-25	2	2560				✓	✓	✓		25	
3-26	3	2560						✓		25	
3-27	1	2560						✓		25	10
3-28	2	2501						✓		25	
3-29	1	2501						✓		25	
3-30	1	Common carrier facility				✓	✓	✓		30	12
3-31	1	Common carrier facility				✓	✓	✓		30	13, 16
3-34	1	Common carrier facility				✓	✓	✓		30	12, 15, 16
3-35	2	3340-A2						✓		200	
3-36	1	3340-A2						✓		200	
3-37	1	Data set 2			✓					30	1(a,c), 17
3-38	1	Data set 2			✓					30	1(c), 19
3-39	1	Common carrier facility			✓					30	12, 15
3-40	1	Common carrier facility			✓					30	13, 16
3-41	1	Common carrier facility			✓					30	12, 16
h or l	1	3277, 3284, 3286, 3288	✓		✓		✓	✓		2000	20
3-42	1	3340-C2					✓			40	
3-43	1	3340-C2					✓			40	
3-44	1	Data set 1	✓							30	1(a,c), 2
3-45	1	Autocall unit 1	✓							30	1(a), 4
3-46	1	Data set	✓							30	1(c), 5
3-47	1	Data set BSCC						✓		30	1(a,c), 22
3-48	1	Data set - BSCC						✓		30	25
3-49	1	Common carrier facility						✓		30	23
3-50	1	Common carrier facility						✓		30	16, 23, 24

*Cable is used on system identified by CPU shown, but connects to unit listed under *Other*.

Notes:

1. Communication cables are supplied with the appropriate termination for attachment to communications facilities. Terminations provided are (a) EIA RS 232 connector with 60 Hz; (b) Burndy MD 12 MXP connector with 60 Hz; (c) CCITT connector with 50 Hz.
2. For use with BSCA (SF2074) and without high speed adapter rate (SF9755) at 1200 bps sw-non sw Sweden (SF2837).
3. For use with BSCA (SF2074) and high speed adapter rate (SF9755).
4. For use with autocall (SF1315).
5. For use with BSCA (SF2074) and 1200 bps sw-non sw, Sweden (SF2837). Includes 8-inch (20 cm) adapter cable.
6. For use with one 5445 Model 1 or Model 3. Order a second cable group 3-16 if a second 5445 Model 1 or Model 3 is to be connected. Model 2 does not require an external cable.
7. For use with BSCA (SF2084) or medium speed synchronous line (SF6202) and without 1200 bps sw-non sw, Sweden (SF2857).
8. For use with autocall (SF1325).
9. For use with BSCA (SF2084) or medium speed synchronous line (SF6202) and 1200 bps sw-non sw, Sweden (SF2857).
10. For use with card print feature (SF1575).
11. Devices approved for (1) direct attachment to the BSCA (SF2074 or SF2084) via the EIA local attachment (SF3601 or SF3602) or via the local communications adapter (SF4765) or for (2) direct attachment to the integrated communications adapter (SF4645) via local interface (SF4801 or SF4802); use the data set cable ordered with the attached device. Do not use the System/3 data set cables (such as group 3-02 or 3-07).
12. For use with non-sw integrated modem (SF4781). The customer or common carrier must provide and attach a Western Electric 404 B (or equivalent) receptacle to the line.
13. For use with sw integrated modem (SF4782). Not available for 50 Hz systems.
14. Cable, which is 7 feet long, is supplied with the 3284 attachment (SF7901).
15. In Japan, use cable group 3-30 with adapter cable supplied with NTT DI service connection (SF2943).
16. The customer is responsible for having this cable connected to the communications facility.
17. For use with medium speed synchronous line (SF6202) and without 1200 bps sw-non sw Sweden (SF2857).
18. Cable provided with I/O adapter (SF3265 or SF3266) on the 3741. Specify 9018 and indicate a length of 20 or 40 feet.
19. For use with medium speed synchronous line (SF6202) and 1200 bps sw-non sw Sweden (SF2857). Includes an 8-inch (20-cm) adapter cable.
20. For use with display adapter (SF4601), device interface (SF4602), local display adapter (SF4702), integrated display adapter, or display increment (SF4704). Customer supplied, installed, and maintained cable; maximum length not to exceed 2000 feet. Cables may be ordered through an IBM branch office via MES (Miscellaneous Equipment Specification). See *IBM 3270 Information Display System Installation Manual—Physical Planning, GA27-2787*, for cable specifications and IBM part numbers. If the customer elects to construct his own cable and/or procure commercial parts, see the section entitled *Cable Installation Practice for 3270* in GA27-2787. For completion of MES order form, see the following example:
21. Cables are supplied with the 5448. Signal cable length is 12 feet for the Model 8; 9 feet for the Model 10. Power cable length is 20 feet.
22. For use with EIA/CCITT interface (SF3703 or SF3704).
23. For use with 1200 bps integrated modem (SF5803 or SF5804). The customer or common carrier must provide and attach a Western Electric 404B (or equivalent) receptacle to the line.
24. In Japan, use cable group 3-49 with adapter cable supplied with NTT DI service connection (SF2943).
25. For use with DDS adapter (SF5813 or SF5814). Termination is compatible with American Telephone and Telegraph Corporation DDS Network Channel Service Unit (CSD).
26. Devices approved for direct attachment to the BSCC (SF2094) via the EIA/CCITT local attachment (SF3603 or SF3604) use the data set cable ordered with the attached device. Do not use the System/3 data set cables (such as cable group 3-02 or 3-07).

Machine/Program Type/Serial/Suffix	Feature Code RPQ Reference No. ECA or CEM Number	Description of MES Parts				QTY	Part or B/M Number
		RPQ Region Number (Indicate Model Changes From/To)					
Cable Group	Length	From		To			
		Unit	No.	Unit			
h	2,000	3277	8	5415		1	2577672
l	2,000	3277	9	5415		1	1833108

If the installation includes a multiple number of one machine type, include an identifying number in the *No* column in addition to the machine type.

Section 5. System/3 Specification Summary

ENGLISH UNITS

Type	Model	Description	Electrical		Environmental		Weight (lbs)	Dimensions (inches)			Service Clearance (inches)				Note (listed on facing page)
			kVA	Conn Type	Btu/Hr	Ft ³		Width	Depth	Height	F	R	Rt	L	
129		Card Data Recorder	0.4	H, J, K, L	850		255	36	29-1/2	38	24	24	0	0	
1255	1, 2, 21, 22	Magnetic Character Reader	1.0	A	2600	300	560	39	29-1/2	55	30	40	30	30	1
1255	3, 23	Magnetic Character Reader	1.0	A	2600	300	700	58 1/2	29-1/2	55	30	40	30	30	1
1270	1, 2, 3, 4	Optical Reader Sorter	3.0	B	8000	400	1430	78	29-1/2	55	30	42	40	40	14
1403	2, 5	Printer	1.0		3000	310	750	47-3/4	28-1/2	54 1/4	36	36	30	30	2
1403	N1	Printer	1.5		4500	350	1250	57-1/8	29	53-1/2	36	36	42	42	2
1442	6, 7	Card Read Punch	0.7		1800	50	520	43	24	49	36	30	6	18	3, 15
2222	1, 2	Printer	0.25		780	80	200	40	18-5/8	16					3, 4
2265	2	Display Station	0.2		550		120	18-3/8	17-3/8	16-3/8					3, 4
2501	A1, A2	Card Reader	0.3		700	50	340	30	24	45	36	36	24	6	3
2560	A1, A2	Multi-Function Card Machine	1.3		3600	100	875	62	31	44	36	36	24	36	3
3277	1	Display Station	0.2		525		70	14-1/2	16	16-7/8					3, 4
3284	1, 2, 3	Printer	0.3		770		135	26-3/8	15 1/4	37-3/4	30	30	0	0	3
3340	A2	Disk Storage	2.2	D	6500	400	900	45	33-1/2	46-1/2	36	36	0	36	14, 19
3340	B1	Disk Storage	1.2		3500	400	600	42	33-1/2	46-1/2	36	36	0	0	19
3340	B2	Disk Storage	1.7		5000	400	750	42	33-1/2	46-1/2	36	36	0	0	19
3340	C2	Disk Storage	1.8	B	5000	400	900	48	33-1/2	46-1/2	36	36	24	36	14
3344	B2	Direct Access Storage	1.7		5000	400	850	45	33-1/2	46-1/2	36	36	0	0	19
3410	1, 2, 3	Magnetic Tape Unit	0.3		850	60	180	31	27	39	36	6	0	0	5
3411	1, 2, 3	Magnetic Tape Unit & Control	1.2	C	3500	200	325	31	27	39	36	6	0	0	13, 14
3741	All	Data Station	0.4	H, J, K, L	700	150	240	42	26-1/4	34	30	24	0	18	9
3881	1	Optical Mark Reader	1.2	C	3500	25	875	60	24	55	42	36	0	30	13, 14
5203	1, 2	Printer	0.7		2000		550	56-1/4	20	41 1/2					3, 4
5203	3	Printer	1.1		3300		550	56-1/4	20	41-1/2					3, 4
5213	1, 2, 3	Printer	0.2		250		110	30	13	13-1/2					3, 4
5404		Processing Unit	2.5	D	7000	300	900	24	44	45					4, 9, 13
5406	All	Processing Unit	2.6	A or D	7300	300	1300	93	44	45					4, 9, 13
5408	All	Processing Unit	2.6	D	6800	300	1330	24	49	46-1/4					4, 9, 13
5410	All	Processing Unit	2.5	D	8300	500	1000	24	47	60					4, 6, 13
5410	All	Processing Unit with SF5732	3.4	D	11200	650	1075	24	47	60					4, 6, 13
5410	All	Processing Unit with SF5734	4.3	D	14000	800	1150	24	47	60					4, 6, 13
5412		Processing Unit	3.4	D	11200	650	1250	24	69-1/4	60					1, 4, 13
5412		Processing Unit with SF5732	4.5	D	14700	750	1325	24	69-1/4	60					1, 4, 13
5412		Processing Unit with SF5734	5.6	D	17700	900	1400	24	69-1/4	60					1, 4, 13
5415	All	Processing Unit	4.5	D	14700	750	1325	24	69-1/4	60					1, 4, 13
5415	All	Processing Unit with SF5734	5.6	D	17700	900	1400	24	69-1/4	60					1, 4, 13
5421	1	Printer Control	1.0	D	1800	250	405	50	20	29	36	30		24	18
5422		Disk Enclosure	0.4		1000			34	29-1/2	29-1/2					3, 4, 7
5424	All	Multi-Function Card Unit	0.8		2000			34	29-1/2	55					3, 4, 8, 16
5444	All	Disk Storage Drive	0.25		700		90	16	28	10					3, 4, 8
5445	1	Disk Storage Drive	1.0	A	2800	280	800	29	32	60	36	36	0	0	9, 17
5445	2	Disk Storage Drive	0.7		1900	200	670	29	32	60	36	36	0	0	10, 17
5445	3	Disk Storage Drive	1.7	A	4700	480	1150	56	32	60	36	36	0	0	9
5447	A1	Disk Storage & Control	0.35		1000		560	69	37	29-1/2					4
5447	A2	Disk Storage & Control	0.6		1700		650	69	37	29-1/2					4
5448		Disk Storage Drive	0.9		2400	200	510	34	35-1/2	29-1/2	30	24	24	12	3
5471	1	Printer-KeyBoard	0.2		500		60	20	16	8					3, 4
5475	1	Data Entry Keyboard					15	16	13	5					3, 4
5486	1, 2	Card Sorter	0.6	H	1150		250	48	24	54	30	24	24	0	11
5496	1, 2	Data Recorder	0.4	H	850		250	42	24	37-1/2	30	6	18	0	11, 12

Notes:

1. Power cord is 10 feet long.
2. 1403 is powered from 5421.
3. Powered from processing unit.
4. See Section 2 for service clearances.
5. Powered from 3411.
6. Power cord is 8 feet long. (1403 attachment requires additional power outlet – see note 2)
7. For System/3 Models 10 and 15, include weight of 5444 and associated hardware with weight of 5422:
5422 with one 5444 400 lbs
5422 with two 5444s 510 lbs
8. For System/3 Models 10 and 15, include weight of 5444 and associated hardware with weight of 5424:
5424 alone 450 lbs
5424 with one 5444 600 lbs
5424 with two 5444s 700 lbs
9. Power cord is 8 feet long.
10. Receives power from Model 1.
11. Power cord is 7 feet long.
12. Right service clearance is needed above tabletop only.
13. This unit is equipped with radio interference control circuitry and requires a good insulated wired earth or building ground. Total resistance of the ground conductor, measured between the receptacle and the building ground point, may not exceed 3 ohms. For proper operation, all components of the system or systems to which this unit is attached must have the same ground reference. Conduit is not a satisfactory means of grounding.
14. Power cord is 14 feet long.
15. Left service clearance not required from floor level to 30 inches above the floor.
16. On disk-oriented systems, the thick rear cover increases machine depth to 35-1/2 inches. This cover may be removed for machine installation.
17. Specified weight is maximum.
18. Power cord is 11-1/2 feet long.
19. Service clearance on right side is 24 inches if this is an end unit.

METRIC UNITS

Type	Model	Description	Electrical, 50 Hz		Environmental		Weight (kg)	Dimensions (cm)			Service Clearance (cm)				Notes (listed on facing page)
			kVA	Cord Style	kcal/hr	m ³		Width	Depth	Height	F	R	Rt	L	
129		Card Data Reader	0.4	A2	220		120	91	75	97	61	61	0	0	
1255	1, 2, 21, 22	Magnetic Character Reader	1.0	A1	650	8	255	99	75	140	76	102	76	76	2
1255	3, 23	Magnetic Character Reader	1.0	A1	650	8	320	149	75	140	76	102	76	76	2
1270	1, 2, 3, 4	Optical Reader Sorter	3.0	B1	2000	10	650	198	75	140	76	107	102	102	3
1403	2, 5	Printer	1.0		750	9	340	121	72	135	91	91	76	76	4
1403	N1	Printer	1.5		1130	10	570	145	74	136	91	91	107	107	4
1442	6, 7	Card Read Punch	0.7		450	1.4	240	109	61	124	91	76	15	46	1, 16
2222	1, 2	Printer	0.25		200	2	90	102	47	41					1, 5
2265	2	Display Station	0.2		140		55	47	44	42					1, 5
2501	A1, A2	Card Reader	0.3		180	1.4	155	77	61	115	91	91	61	15	1
2560	A1, A2	Multi-Function Card Machine	1.3		910	3	400	157	79	112	91	91	61	91	1
3277	1	Display Station	0.2		140		35	37	41	43					1, 5
3284	1, 2, 3	Printer	0.3		200		65	67	39	96	76	76	0	0	1
3340	A2	Disk Storage	2.2	D2	1650	12	410	114	85	118	91	91	0	91	3, 24
3340	B1	Disk Storage	1.2		890	12	280	114	85	118	91	91	0	0	24
3340	B2	Disk Storage	1.7		1300	12	350	114	85	118	91	91	0	0	24
3340	C2	Disk Storage	1.8	D2	1300	12	410	122	85	118	91	91	61	91	3
3344	B2	Direct Access Storage	1.7		1300	12	390	114	85	118	91	91	0	0	24
3410	1, 2, 3	Magnetic Tape Unit	0.3		220	2	80	79	69	99	91	15	0	0	6
3411	1, 2, 3	Magnetic Tape Unit & Control	1.2	A2	880	6	150	79	69	99	91	15	0	0	3, 8, 18
3741	All	Data Station	0.4		180	4	109	107	67	87	76	61	0	46	12
3881	1	Optical Mark Reader	1.2	A2	880	0.7	400	152	61	140	107	91	0	76	3, 8
5203	1, 2	Printer	0.7		500		250	143	51	105					1, 5
5203	3	Printer	1.1		830		250	143	51	105					1, 5
5213	1, 2, 3	Printer	0.2		70		50	76	33	34					1, 5
5404		Processing Unit	2.5	D2	1770	9	410	61	112	114					5, 8, 12
5406	All	Processing Unit	2.6	D2	1840	9	590	236	112	114					5, 8, 12
5408	All	Processing Unit	2.6	D2	1750	9	605	61	124	117					5, 8, 12
5410	All	Processing Unit	2.5	B1	2100	14	460	61	119	152					5, 8, 9
5410	All	Processing Unit with SF5732	3.4	B1	3275	18	490	61	119	152					5, 8, 9
5410	All	Processing Unit with SF5734	4.3	B1	3530	23	520	61	119	152					5, 8, 9
5412		Processing Unit	3.4	B1	2820	18	570	61	176	152					2, 5, 8
5412		Processing Unit with SF5732	4.5	B1	3700	21	600	61	176	152					2, 5, 8
5412		Processing Unit with SF5734	5.6	B1	4460	25	635	61	176	152					2, 5, 8
5415	All	Processing Unit	4.5	B1	3720	21	600	61	176	152					2, 5, 8
5415	All	Processing Unit with SF5734	5.6	B1	4420	25	635	61	176	152					2, 5, 8
5421	1	Printer Control	2.2	B1	550	7	185	127	51	74	91	76		61	5, 19, 23
5422		Disk Enclosure	0.4		250			86	75	75					1, 5, 10
5424	All	Multi-Function Card Unit	0.8		500			86	75	140					1, 5, 11, 17
5444	All	Disk Storage Drive	0.25		170		40	41	71	25					1, 5, 11
5445	1	Disk Storage Drive	1.3	A8	710	8	370	74	81	151	91	91	0	0	12, 19, 22
5445	2	Disk Storage Drive	1.0		480	6	300	74	81	151	91	91	0	0	13, 20, 22
5445	3	Disk Storage Drive	2.3	A8	1185	14	520	142	81	151	91	91	0	0	12, 21
5447	A1	Disk Storage & Control	0.35		240		255	175	95	75					5
5447	A2	Disk Storage & Control	0.6		410		295	175	95	75					5
5448		Disk Storage Drive	0.9		605	6	235	87	90	75	76	61	61	31	1
5471	1	Printer-KeyBoard	0.2		130		30	51	41	20					1, 5
5475	1	Data Entry Keyboard					10	41	33	13					1, 5
5486	1, 2	Card Sorter	0.6	A5	290		115	122	61	137	76	61	61	0	14
5496	1, 2	Data Recorder	0.6	A5	220		115	107	61	95	76	15	46	0	8, 14, 15

Notes:

1. Powered from processing unit.
2. Power cord is 3 meters long.
3. Power cord is 4.3 meters long.
4. 1403 is powered from 5421.
5. See Section 2 for service clearances.
6. Powered from 3411.
8. This unit is equipped with radio interference control circuitry and requires a good insulated wired earth or building ground. Total resistance of the ground conductor, measured between the receptacle and the building ground point, may not exceed 3 ohms. For proper operation, all components of the system or systems to which this unit is attached must have the same ground reference. Conduit is not a satisfactory means of grounding.
9. Power cord is 2.4 meters long. (1403 attachment requires additional power outlet – see note 2)
10. For System/3 Models 10 and 15, include weight of 5444 and associated hardware with weight of 5422:
 5422 with one 5444 185 kg
 5422 with two 5444s 235 kg
11. For System/3 Models 10 and 15, include weight of 5444 and associated hardware with weight of 5424:
 5424 alone 205 kg
 5424 with one 5444 275 kg
 5424 with two 5444s 320 kg
12. Power cord is 2.4 meters long.
13. Receives power from Model 1.
14. Power cord is 2.1 meters long.
15. Right service clearance is needed above tabletop only.
16. Left service clearance not required from floor level to 76 cm above the floor.
17. On disk-oriented systems, the thick rear cover increases machine depth to 90 cm. This cover may be removed for machine installation.
18. 50 Hertz 3411 Model 1 power cord is style A2; 50 Hertz 3411 Models 2 and 3 power cords are style D2.
19. Power for 60 Hertz models is 1.0 kVA.
20. Power for 60 Hertz models is 0.7 kVA.
21. Power for 60 Hertz models is 1.7 kVA.
22. Specified weight is maximum.
23. Power cord is 3.5 meters long.
24. Service clearance on right side is 61 cm if this is an end unit.

50 Hz Power cord style	Cable OD		Shield	Conductor			For use with the following 50 Hz supply voltages:
	(in)	(cm)		Quantity	Nominal OD		
					(in)	(cm)	
A1	0.520	1,0	1	3	0.064	0,2	Single phase 3 wire; 200, 220, 235V
A2	0.510	1,0	1	3	0.081	0,2	Single phase 3 wire; 112.5, 123.5, 195, 220, 235V
A5	0.390	1,0	0	3	0.051	0,1	Single phase 3 wire; 100, 110, 123.5, 200, 220, 235V
A6	0.374	1,0	0	3	0.040	0,1	Single phase 3 wire; 100, 110, 123.5, 220, 235V
A8	0.39	1,0	0	3	0.064	0,2	Single phase 3 wire; 200, 220, 235V
B1	0.713	2,0	0	5	0.102	0,3	3 phase, 4 wire; 200, 220, 235V
D2	0.750	2,0	1	5	0.102	0,3	3 phase, 5 wire; 380, 408V 3 phase, 4 wire; 200, 220, 235V 3 phase, 5 wire; 380, 408V

INCH TO CENTIMETER CONVERSION CHART

Inch	Centimeters				Inch	Centimeters			
	0	1/4	1/2	3/4		0	1/4	1/2	3/4
0	0	0.6	1.3	1.9	50	127.0	127.6	128.3	128.9
1	2.5	3.2	3.8	4.4	51	129.5	130.2	130.8	131.4
2	5.1	5.7	6.4	7.0	52	132.1	132.7	133.3	134.0
3	7.6	8.3	8.9	9.5	53	134.6	135.3	135.9	136.5
4	10.2	10.8	11.4	12.1	54	137.2	137.8	138.4	139.1
5	12.8	13.3	14.0	14.6	55	139.7	140.3	141.0	141.6
6	15.2	15.9	16.5	17.1	56	142.2	142.9	143.5	144.1
7	17.8	18.4	19.1	19.6	57	144.8	145.4	146.0	146.7
8	20.3	21.0	21.6	22.2	58	147.3	148.0	148.6	149.2
9	22.9	23.5	24.1	24.8	59	149.9	150.5	151.1	151.8
10	25.4	26.0	26.7	27.3	60	152.4	153.0	153.7	154.3
11	27.9	28.6	29.2	29.8	61	154.9	155.6	156.2	156.8
12	30.5	31.1	31.7	32.4	62	157.5	158.1	158.8	159.4
13	33.0	33.7	34.3	34.9	63	160.0	160.7	161.3	161.9
14	35.6	36.2	36.8	37.5	64	162.6	163.2	163.8	164.5
15	38.1	38.7	39.4	40.0	65	165.1	165.7	166.4	167.0
16	40.6	41.3	41.9	42.5	66	167.6	168.3	168.9	169.5
17	43.2	43.8	44.4	45.1	67	170.2	170.8	171.4	172.1
18	45.7	46.4	47.0	47.6	68	172.7	173.4	174.0	174.6
19	48.3	48.9	49.5	50.2	69	175.3	175.9	176.5	177.2
20	50.8	51.4	52.1	52.7	70	177.8	178.4	179.1	179.7
21	53.3	54.0	54.6	55.2	71	180.3	181.0	181.6	182.2
22	55.9	56.5	57.1	57.8	72	182.9	183.5	184.1	184.8
23	58.4	59.1	59.7	60.3	73	185.4	186.1	186.7	187.3
24	61.0	61.6	62.2	62.9	74	188.0	188.6	189.2	189.9
25	63.5	64.1	64.8	65.4	75	190.5	191.1	191.8	192.4
26	66.0	66.7	67.3	67.9	76	193.0	193.7	194.3	194.9
27	68.6	69.2	69.9	70.5	77	195.6	196.2	196.8	197.5
28	71.1	71.8	72.4	73.0	78	198.1	198.8	199.4	200.0
29	73.7	74.3	74.9	75.6	79	200.7	201.3	201.9	202.6
30	76.2	76.8	77.5	78.1	80	203.2	203.8	204.5	205.1
31	78.7	79.4	80.0	80.6	81	205.7	206.4	207.0	207.6
32	81.3	81.9	82.6	83.2	82	208.3	208.9	209.6	210.2
33	83.8	84.5	85.1	85.7	83	210.8	211.5	212.1	212.7
34	86.4	87.0	87.6	88.3	84	213.4	214.0	214.6	214.3
35	88.9	89.5	90.2	90.8	85	215.9	216.5	217.2	217.8
36	91.4	92.1	92.7	93.3	86	218.4	219.1	219.7	220.3
37	94.0	94.6	95.2	95.9	87	221.0	221.6	222.2	222.9
38	96.5	97.1	97.8	98.4	88	223.5	224.2	224.8	225.4
39	99.1	99.7	100.3	101.0	89	226.1	226.7	227.3	228.0
40	101.6	102.2	102.9	103.5	90	228.6	229.2	229.9	230.5
41	104.1	104.8	105.4	106.0	91	231.1	231.8	232.4	233.0
42	106.7	107.3	108.0	108.6	92	233.7	234.3	235.0	235.6
43	109.2	109.9	110.5	111.1	93	236.2	236.9	237.5	238.1
44	111.8	112.4	113.0	113.7	94	238.8	239.4	240.0	240.7
45	114.3	114.9	115.6	116.2	95	241.3	241.9	242.6	243.2
46	116.8	117.5	118.1	118.7	96	243.8	244.5	245.1	245.7
47	119.4	120.0	120.6	121.3	97	246.4	247.0	247.7	248.3
48	121.9	122.6	123.2	123.8	98	248.9	249.6	250.2	250.8
49	124.5	125.1	125.7	126.4	99	251.5	252.1	252.7	253.4
					100	254.0			



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