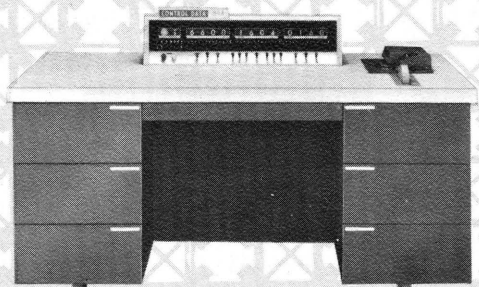
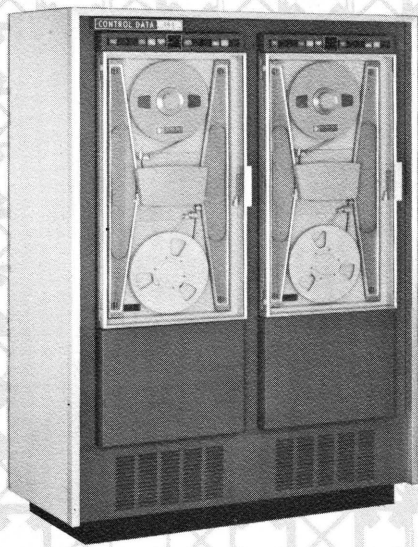


CONTROL DATA
160-A COMPUTER
INSTALLATION MANUAL



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The Control Data 160-A computer system is designed to be used with a minimum of environmental restrictions. This manual, which will be furnished to the customer well in advance of shipment of the computer system, provides electrical and physical information to aid in the preparation of a suitable site for the system. Detailed data on equipment sizes, power requirements and cables are also included. For information concerning other than the more common equipments consult Control Data Corporation.

A Control Data Corporation engineer accompanies the system to the site and supervises the installation. General requirements for the system are reviewed at the time of installation and any modifications to the cabling system are resolved.

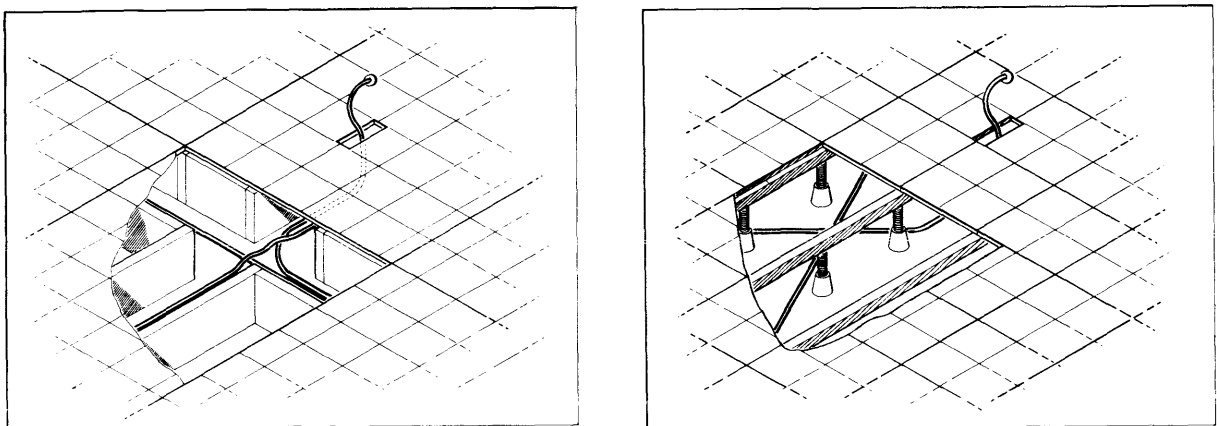
GENERAL REQUIREMENTS

FLOOR

Connecting cables in the computer system enter the cabinets through openings in the bottom. Raceways may be built into the floor, or cable troughs may be laid on top of the floor (optional with customer). If raceways are used, cables are protected from damage and may be routed without restriction (figure 1).

TEMPERATURE

Blowers cool the equipment by drawing air through reuseable filters at the bottom of the cabinet, forcing it up and out through louvres in the rear.



A. False Floor - Raceway Type

B. False Floor - Pedestal Type

Figure 1. False Floors

The system operates in a normal room air environment not exceeding 80⁰F. Heat generated by the equipment should be quickly removed from the vicinity of the cabinets by circulation of the room air. The additional heat load (table 1) caused by the equipment can be dissipated through increased air conditioning capacity.

A low humidity limit of 40% will minimize static build up on magnetic tape; a high limit of 60% will prevent deterioration of punched cards and acetate magnetic tape.

AREA CLEANLINESS

Clean the computer site regularly to avoid dust accumulation. Dust and cigarette ashes in the immediate vicinity of the tape handlers may collect on the magnetic tape and cause errors in operation. Avoid smoking when handling magnetic tapes.

FIRE PRECAUTIONS

Locate fire extinguishers near the system; observe normal fire precautions.

SPACE AND LAYOUT REQUIREMENTS

The position of the equipment cabinets will be partially determined by the size and shape of the area available for the computer installation. In general, the operator seated at the computer should be able to view the tape handlers and other equipment with moving parts. Cabinets should be arranged to permit easy access both for operator and maintenance personnel. There should be a three-foot clearance surrounding each piece of equipment to allow for free movement of test equipment.

Installation information, including dimensions and door swings, are given for each equipment on figures 2, 3 and 5. Dimensions and weights are summarized in table 1; table 2 gives connector information.

The magnetic tape system may be either bolted to the floor or supplied with special stabilizing bars.

As an aid to planning, templets of the various equipments may be cut from figure 4 at the back of this manual. The templets are scaled 1/4 inch to one foot.

POWER REQUIREMENTS

The power service facilities for the computer system are supplied by the customer and should be installed prior to arrival of the system. Exceptions are those items specifically noted to be supplied and installed by Control Data Corporation at the time of installation.

POWER SERVICE

The primary power requirement consists of 115 volt, 60 cycle single phase. Current requirements are listed in table 1. A typical 160-A system uses normal convenience outlets in the computer area for the computer and typewriter (161) unit. Magnetic tape handlers require special heavy-duty wiring. At the customer's option, this single phase power may be derived from one leg of a 3 phase, y connected source.

CABLES

The information cables which connect the various elements in the computer system will be delivered at the time of installation. All information cables are identical except for length. Total cable length should not exceed 75 feet. Prior to delivery, the customer can determine the length of the cables by referring to his equipment layout plan and if the total length of the cables exceeds 75 feet revisions can be made. The cable designations in table 2 are for the purpose of identification. Detailed cable makeup and interconnection data are found in the maintenance volume.

At the time the customer submits the final equipment configuration, Control Data Corporation should be advised of any unusual cabling requirements or obstructions beneath the floor that will interfere with the cables. This should be done no later than two months prior to shipment.

All cables in the system are supplied by Control Data Corporation at the time of delivery. Standard cable lengths are 15 feet and 25 feet. Any unusual lengths may be purchased from Control Data Corporation or supplied independently by the buyer.

Cables supplying power to the MTU cabinets originate at the breaker panel where they are permanently installed. Sufficient spare cable should be allowed to accommodate minor changes in location of the equipment. The power cable should not exceed 100 feet in length.

TABLE 1. SPECIFICATION OF THE 160-A COMPUTER SYSTEM

	160-A Computer	161 Typewriter	163 Tape Unit Each
WIDTH	61 5/8"	29 1/2"	26 5/8"
DEPTH	30"	30"	27 1/2"
HEIGHT	36"	37 1/2"	68"
WEIGHT	810#	350#	690#
BTU/HR	7860	2300	9500 (1)
60 CYCLE POWER REQUIREMENTS			
115v	16A (2)	3.5 (2)	17A (2) (handler) 8A (control panel)
<p>(1) Add 6500 BTU/Hr for each additional tape unit</p> <p>(2) Maximum line current with all equipment on; add 8A for convenience outlet</p>			

TABLE 2. CABLE CONNECTIONS, INPUT/OUTPUT EQUIPMENT

Type Designation	160-A jack	161 jack	163 jack
Input Cable	1J17	1J06	J101
	1J18	1J07	J102
Output Cable	1J19	1J04	J103
	1J20	1J05	J104
Buffer Input	1J21		
	1J22		
Buffer Output	1J23		
	1J24		

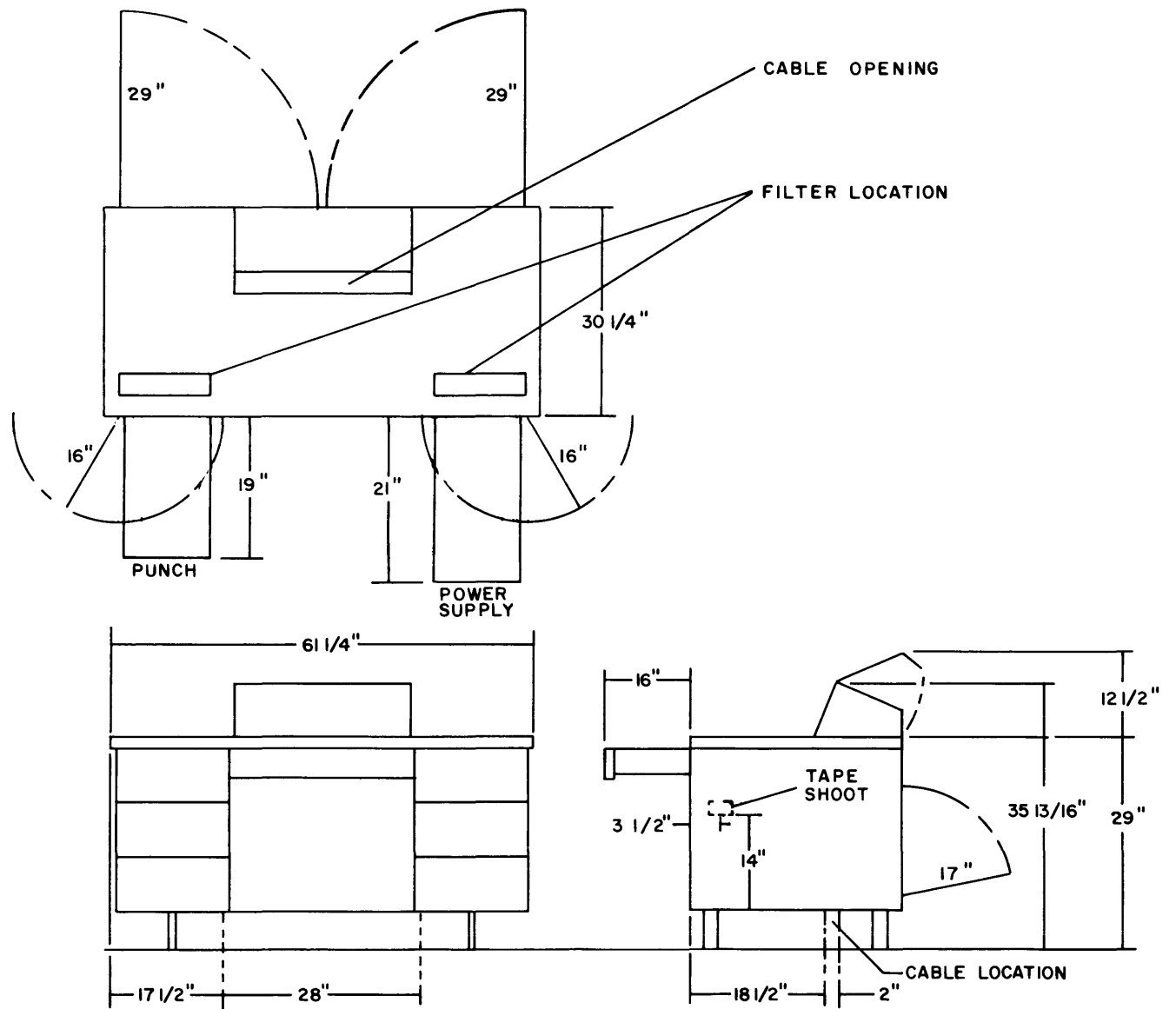


Figure 2. 160-A Computer

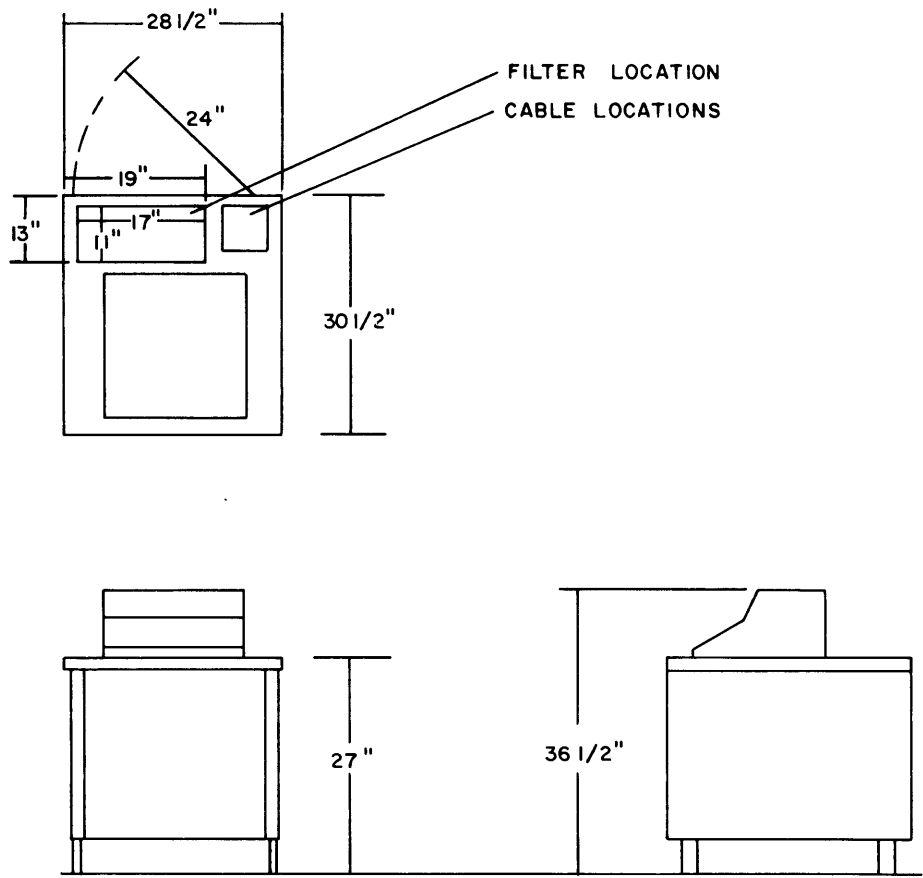
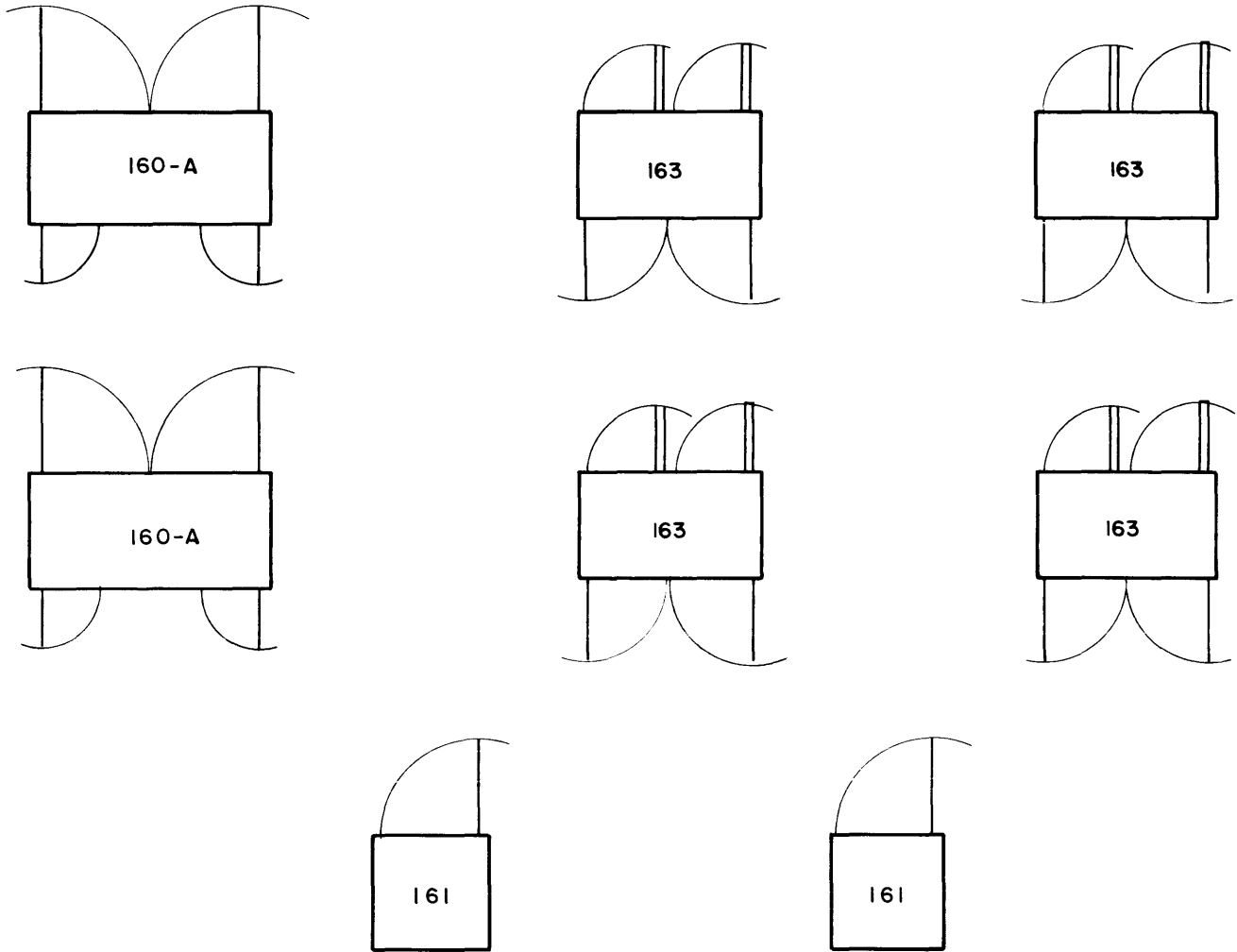


Figure 3. 161 Typewriter Unit



NOTE:
SCALE 1/4"=1'

Figure 4. Computer System Layout Templates

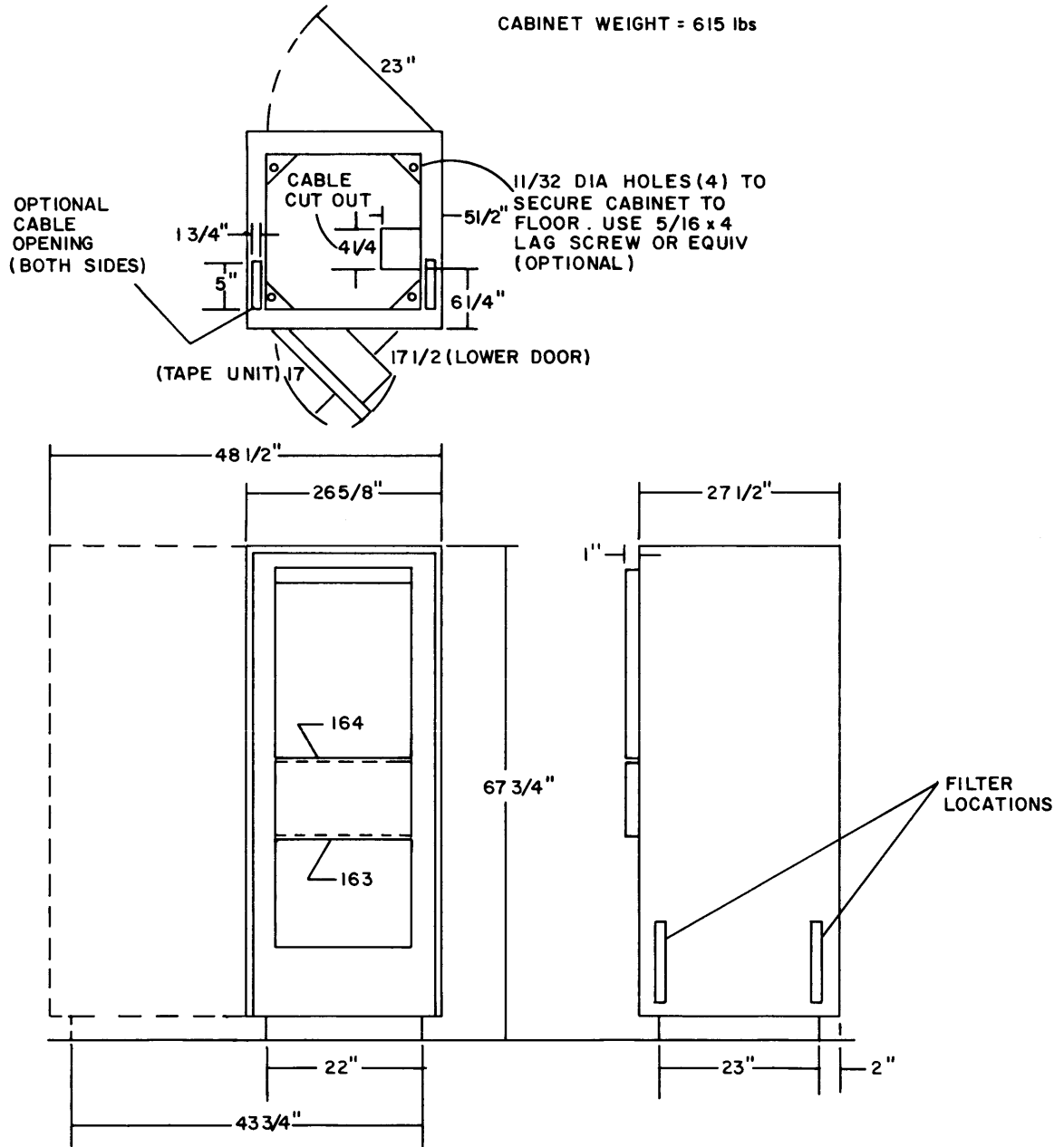


Figure 5. 163 Magnetic Tape System

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