SYSTEM FEATURES
Fast Access
1,966 x 10^6 characters on-line storage
Up to 4 controllers per system
Up to 8 Drives per Controller
Intermixing of Drives
Interchangeable Disk Packs
Overlapped Positioning with Multiple Drives
High Transfer Rate
Latency Minimization Sector Counters
Swapping Capability

DECSYSTEM-10 Disk Systems offer rapid access online storage in large capacities at low cost. Modularly expandable, a system allows up to 4 controllers each with 8 drives, giving a total capacity of 327,680,000 words, or in excess of 1,966 million characters.

The RP10C Disk Controller operates with any combination of two Disk Drives, the RP02 and RP03, with storage capacities of 5,120,000 and 10,240,000 36-bit words per pack, respectively. Thus a system using eight RP02 Drives provides a total on-line capacity of 41,574,400 words, and eight RP03 Drives, 83,148,800 words. In addition to storage, a Disk System can be used to swap programs in and out of core memory.

Since the controller provides overlapped positioner operation, the operating system (monitor) will simultaneously position two or more Disk Drives, shortening the effective access time and increasing throughput. In addition, the monitor uses the controller's sector counters to minimize the effect of rotational latency and further increase throughput.

CONTROLLER SPECIFICATIONS
AC Voltage 115 V±10%, 60 Hz±2 Hz
230 V±10%, 50 Hz±2 Hz
Current 8 A @ 115 V
Power Dissipation 900 Watts
Heat Dissipation 3100 Btu/Hr
Operating Temperature 60° F to 95° F (16° C to 35° C)
Relative Humidity 20% to 80%
Height 69 inches (176 cm)
Width 21.25 inches (53.9 cm)
Depth 27 inches (68.6 cm)
Weight 390 lbs (178 kg)

DISK DRIVES
DECSYSTEM-10 Disk Drives provide fast access. The RP02's and RP03's transfer up to 25,600 words in a single access at a rate of 16,000 per 86 bit word. Access speed is due to a high speed head positioner design which uses a servo-controlled linear motor to convert electrical energy directly into linear motion. A dynamic disk brake facilitates operation by reducing Disk Pack replacement time.

Each Disk Drive includes one removable Disk Pack, RP02P for the RP02 and RP03P for the RP03.
### DRIVE SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>RP03</th>
<th>RP02</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DISK PACK CAPACITY</strong></td>
<td>10,240,000 36-bit words</td>
<td>5,120,000 36-bit words</td>
</tr>
<tr>
<td><strong>DATA TRANSFER RATE</strong></td>
<td>66,666 words (15 μs/word)</td>
<td>66,666 words (15 μs/word)</td>
</tr>
<tr>
<td><strong>ACCESS TIME</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track-to-Track:</td>
<td>7 ms</td>
<td>12 ms</td>
</tr>
<tr>
<td>Average:</td>
<td>29 ms</td>
<td>35 ms</td>
</tr>
<tr>
<td>Maximum:</td>
<td>55 ms</td>
<td>60 ms</td>
</tr>
<tr>
<td><strong>ROTATIONAL SPEED</strong></td>
<td>2400 rpm</td>
<td>2400 rpm</td>
</tr>
<tr>
<td><strong>ORGANIZATION</strong></td>
<td>128 words/sector</td>
<td>128 words/sector</td>
</tr>
<tr>
<td></td>
<td>10 sectors/track</td>
<td>10 sectors/track</td>
</tr>
<tr>
<td></td>
<td>20 tracks/cylinder</td>
<td>20 tracks/cylinder</td>
</tr>
<tr>
<td></td>
<td>400 cylinders/disk pack</td>
<td>200 cylinders/disk pack</td>
</tr>
<tr>
<td><strong>NUMBER OF HEADS</strong></td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>NUMBER OF RECORDING SURFACES</strong></td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>NUMBER OF DISKS</strong></td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td><strong>OPERATING ENVIRONMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>60° F to 90° F (16° C to 32° C)</td>
<td>60° F to 90° F (16° C to 32° C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>10% to 80%</td>
<td>10% to 80%</td>
</tr>
<tr>
<td><strong>POWER REQUIREMENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-phase, 60 Hz: 6A/phase (running), 30A/phase (starting surge)</td>
<td>3-phase, 60 Hz: 12A/phase (running), 25A/phase (starting surge)</td>
</tr>
<tr>
<td></td>
<td>3-phase 50 Hz: 4.5A/phase (running), 25A (starting surge).</td>
<td>3-phase 50 Hz: 4.5A/phase (running), 25A (starting surge)</td>
</tr>
<tr>
<td>Drive uses one phase;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>system uses 3-phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DIMENSIONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width:</td>
<td>30 inches (76.2 cm)</td>
<td>30 inches (76.2 cm)</td>
</tr>
<tr>
<td>Depth:</td>
<td>24 inches (61.0 cm)</td>
<td>24 inches (61.0 cm)</td>
</tr>
<tr>
<td>Height:</td>
<td>40 inches (101.6 cm)</td>
<td>39 inches (99.0 cm)</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td>390 lbs. (177.3 kg)</td>
<td>395 lbs. (179 kg)</td>
</tr>
</tbody>
</table>

*Times do not include average rotational latency of 12.5 ms.*
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