

# Disc Drive Unit (DDU)

FA-8337

**UNISYS**



- 100 megabyte disc data storage
- Uses industry standard disc packs
- 806,000 bytes/sec data rate
- 1 track seek 7 milliseconds, average seek 27 milliseconds, maximum seek 50 milliseconds
- Rotational latency, average 8.33 milliseconds, maximum 16.66 milliseconds
- 19 tracks per cylinder, 404 cylinders per disc pack plus 7 spares
- Shaft rotation 3600 rpm
- Write Phase Locked Oscillator (PLO) clock provided to disc controller to clock write data back to the drive

## Applications

- Air Traffic Control Systems
- Communications Systems
- Command and Control Centers
- Data Storage and Retrieval
- Program Storage and Retrieval

## Features

### General Characteristics

#### Accessing

- Movable heads mounted on a common arm
- Heads are moved by electromagnetic actuator and servo system
- Direct access motion
  - Course positioning mode initially moves heads to desired cylinder region
  - Fine positioning mode locates head assembly in registration at the selected cylinder
- Access times
  - One cylinder seek - 7 milliseconds
  - Average seek - 27 milliseconds
  - Maximum seek - 50 milliseconds
  - Average rotational latency time - 8.3 milliseconds

#### Operation

- Start up time (brush cycle, head load, and seek to cylinder 000 - 15 seconds)
- Shut down time (retract head, stop - 15 seconds)
- Disc rotational speed - 3600-rpm

#### Disc Pack

- Type IBM\* 3336 disc pack or equivalent
- Disc diameter - 14 inches
- Number of discs - 12
- Magnetic recording surfaces - 19

#### Read/write

- Number of read/write heads - 19 (plus 1 read head for servo)
- Head offset capability
- Cylinders per disc pack - 404 + 7 spares
- Tracks per cylinder - 19
- Total number of tracks - 7,809 per disc pack
- Data bytes per track, maximum - 13,030
- Data bytes per cylinder maximum - 247,570
- Data bytes per disc pack, maximum - 100,000,000
- Data rate (nominal) - 806,000 bytes/second

#### Interface

- Interfaces with Disc Control Unit (FA-8336)

### Physical Characteristics

- Power - 60 Hz - 208/230 VAC  $\pm 10\%$ , 3-phase, 60 Hz  $\pm 1\%$ , starting current surge less than 30A, running current 6 amps
- Operating temperature range -  $+54^\circ$  to  $90^\circ\text{F}$
- Non-operating temperature range -  $+54^\circ$  to  $90^\circ\text{F}$
- Humidity range - 20%-80% (maximum wet bulb temperature  $78^\circ\text{F}$ )
- Drive cooling (internal) -forced air
- Heat dissipation - 5500 btu/hr nominal 7000 btu/hr maximum
- Service covers - lower front cover, right and left side covers, rear cover, top cover, sliding cover, and EMA cover
- Dimensions
  - Height - 40"
  - Pack Loading Height - 36"
  - Width - 22" (includes 1" for each side cover)
  - Depth - 32"
- Mounting - casters and levellers
- Weight - 481 pounds (without pack); 501 pounds (with pack)
- Installation clearances
  - Front - 28"
  - Rear - 28"
  - Side - 20" (wall clearance)

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For additional information, write to  
Unisys Corporation  
Air Traffic Control Systems  
P.O. Box 64525  
St. Paul, MN 55164-0525  
(612) 456-7714