



T U L I N

**T**ulin offers 40 and 26.7 megabyte half-height 5.25" Winchester disk drives.

TL 300 series drives feature a 40 msec average access time with standard ST506/412 interface. This capacity and performance is provided at a low 16-watt power consumption.

Tulin's superior technology and dedication to quality will increase the overall reliability of your system. 100% functional testing of all drives assures consistent performance.

Integration help, technical service, and complete documentation are available to all Tulin customers. Tulin drives carry a one-year warranty.

# PRODUCT SPECIFICATIONS

<b>PERFORMANCE</b>	TL326	TL340
<b>CAPACITY-UNFORMATTED</b>		
Per Drive (MB)	26.70	40.00
Per Surface (MB)	6.67	6.67
Per Track (Bytes)	10416	10416
<b>CAPACITY-FORMATTED</b>		
Per Drive (MB)	22.28	33.42
Per Surface (MB)	5.57	5.57
Per Track (Bytes)	8704	8704
Per Sector (Bytes)	512	512
Sectors/Track	17	17
Transfer Rate (Mbits/sec)		5.0
<b>ACCESS TIMES* (Includes settling time)</b>		
Track to Track		14 ms
Average		40 ms
Maximum		95 ms
Average Latency Time		8.33 ms
Start Time (maximum)		25 sec
Start Time (typical)		20 sec

\*Access Times based on 20.0/30.0 MB formatted

## FUNCTIONAL

Cylinders*	640	640
Tracks	2560	3840
R/W Heads	4	6
Index		1/Rev
Rotational Speed (rpm)	3600±0.1%	
Recording Density (bpi)	10,000	
Track Density (tpi)	656	
*Ten spare cylinders are provided	640-649	

## RELIABILITY

MTBF (POH)	>12,000
Preventive Maintenance	NONE
MTR (minutes)	30
Component Life (years)	5

## ERROR RATES

Soft (bits read)	1x10 <sup>-10</sup>
Hard (bits read)	1x10 <sup>-12</sup>
Seek	1x10 <sup>-6</sup>

## PHYSICAL

### POWER REQUIREMENTS

Voltage	Tolerance	Ripple
+ 5	± 5%	50 mv
+ 12	± 5%	500 mv

### CURRENT REQUIREMENTS

Voltage	*Idle	*Seeking	Surge
+ 5	.9A	.9A	1.0A
+ 12	1.0A	1.4A	1.6A/2.5A

\*Typical Currents

### HEAT DISSIPATION

Watts	15/16
BTU/hr	50

### PHYSICAL SIZE

Height	1.625 in (4.127 cm)
Width	5.75 in (14.61 cm)
Depth	8.00 in (20.32 cm)
Weight	3.61 lb (1.64 kg)
Acoustical Noise	55 dbA at 1 meter

## ENVIRONMENTAL LIMITS

	STORAGE/TRANSIT	OPERATING
Temperature(F)	-40F to 158F	60F to 122F
Temperature(C)	-40C to 70C	15C to 50C
Temp. gradient*	15 C/hr (27F)	10 C/hr (18F)
Humidity	5-90%	10-85%
Hum. gradient	20%/hr	20%/hr
Altitude	-1000 to 40K ft	-1000 to + 10K ft

\*No condensation

### SHOCK

Operating	10g
Non-operating	40g
Shipping	36" package drop

### VIBRATION

Operating	.036 in displacement	5-17HZ
		17 to 150 HZ .55g
		200 to 500HZ .25g
Non-operating	.5g	5-200HZ
Shipping	1.5g	5-200HZ



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