



Diablo  
Series 30



Diablo Model 31 removable cartridge disk drive

### SERIES 30 CARTRIDGE DISK DRIVES

Diablo Series 30 disk drives are specifically designed to meet the demanding requirements of today's powerful but low cost computer systems. Their small size, quiet operation, and low power consumption mean they can be easily accommodated in a typical office machine configuration. Series 30's unique design eliminates all field adjustments. And, the rugged construction means dependable performance with minimum service. An MTBF in excess of 4000 hours was established during their first year in the field.

In addition to proven performance, design simplicity and ease of service are principal characteristics of Series 30 drives. All high speed moving parts are contained in just two easily replaced sub-assemblies; the Head

Positioner and Spindle/Blower.

Positioning of the Read/Write heads over the desired track is controlled by an electronic servo. A unique non-contacting rotary transducer provides extremely accurate feedback of both position and velocity. Tachometers as well as all potentiometers are eliminated.

Spindle speed is also controlled by electronic servo. This provides very precise control which is independent of variations in line frequency or voltage. A supply of clean air is delivered through an absolute filter to the cartridge by an impeller located on the spindle, eliminating the normal blower, associated motor, and required duct work.

Since Series 30 drives use only DC power they may be used anywhere in the world. Their low power consump-

tion (under 100 watts) permits use of simple, small low-cost power supplies.

Simplicity of service is inherent in the Series 30 design. Electronic components are located on six small low-cost printed circuit boards which may be easily replaced. Mechanical failures are virtually unknown, but the small size and low weight of Series 30 drives make unit replacement logical and economical if repair cannot be accomplished by replacement of printed circuit boards. This simple, quick procedure puts the system back in operation fast and allows repair to be done at the factory or by a qualified repair center. This is a unique feature of Series 30 drives.

Series 30 drives are in volume production in Diablo's main plant in Hayward, California. They are also produced in Europe and Japan by Diablo



Diablo Model 33 Dual Disk Drive

licensees. This provides assurance of a continuous supply of product to all of Diablo's OEM customers.

#### **DIABLO MODEL 31**

The Model 31 is the basic unit in the Series 30 line. It is available either at 1100 bpi or 2200 bpi capacities, and provides either 12,000,000 or 24,000,000 bits of unformatted on-line storage.

All high-speed moving parts are contained in just two sub-assemblies. Spindle speed and head positioning are electronically controlled. The Model 31 is just 6 $\frac{1}{2}$ " high and weighs 40 pounds. Four drives can be stacked in a single, desk-high cabinet.

Mechanical and electrical simplicity mean high reliability, low operating and up-keep costs. Replacement type maintenance makes service easy

and minimizes downtime. The cool, quiet operation and the ability to use multiple Model 31 drives to tailor a system's capacity to exactly suit user requirements, are important features of this field-proven drive.

#### **DIABLO MODEL 33**

The Model 33 provides two independent disk drives. Each is separately housed and physically requires the same space, mounting provisions, and power supply as one Model 31. Interconnection between the two units is through standard I/O connectors and daisy chain select logic.

One unit provides a removable cartridge. In the second unit the cartridge is not removable (required operator controls and safety interlocks relating to exchange of cartridges are removed). In all other respects, a Model

33 is identical to two Model 31 drives. Independent operation of the two drives provides important benefits. First, head positioning on the two drives may be overlapped. Second, operation of the fixed cartridge drive may continue during cartridge exchange in the other drive. Finally, either drive will remain in service independently of the other providing a high degree of overall system reliability.

Ease and simplicity of service characteristic of the Model 31 remain unchanged in the Model 33. Printed circuit boards are interchangeable and either unit may be replaced without effect on the other. Again, the small size and low weight make this replacement concept possible.



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