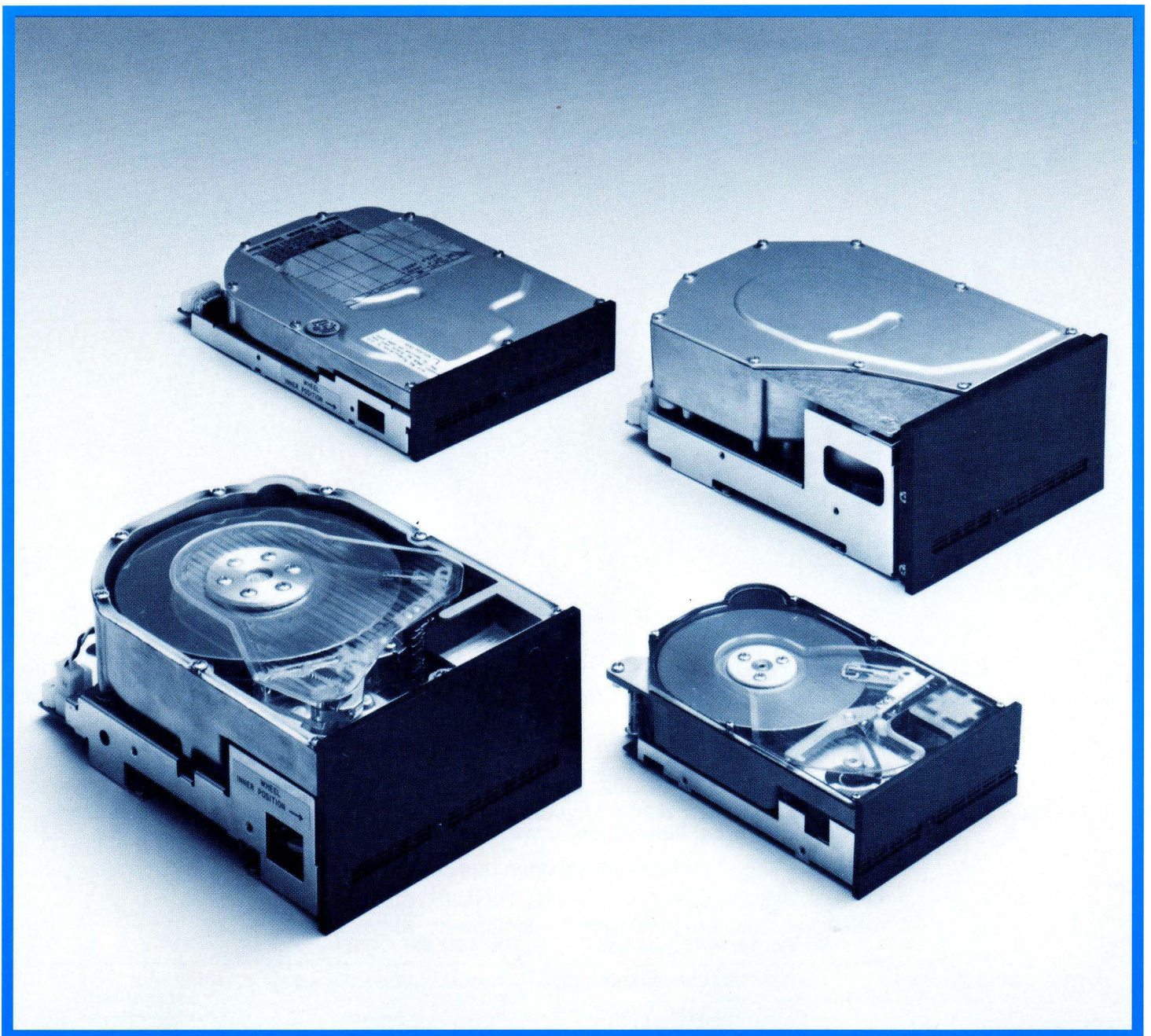


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NPL

C. ITOH FULL LINE OF SMALL WINCHESTER DISK DRIVES NP04/03/02 FAMILY

The disk drive is composed of 5¼-inch or 3.5-inch hard disk storage modules with a recording capacity of 13 to 86 megabytes. Mechanical and electrical interface is easily accessible to Mini floppy.



PERFORMANCE SPECIFICATIONS



| Models | NP04-13/20T | NP04-26F | NP02-13 | NP02-26S | NP03-13/20 | NP04-50 | NP04-85 |
|------------------------------------------------------|----------------------------|----------|------------------|----------|-------------|----------------|---------|
| Performance | | | | | | | |
| Capacity(unformatted) | 13.3/20.0 | 26.6 | 13.3 | 26.6 | 12.7/19.1 | 50.9 | 86.3 |
| (MB) (formatted) | 10.4/15.2 | 20.9 | 10.4 | 20.9 | 10.0/15.0 | 40.0 | 67.9 |
| (32 sectors) | | | | | | | |
| Per surface (MB) | 3.33 | | 6.66 | | 3.18 | 7.28 | 7.85 |
| Per track (KB) | 10.416 | | | | | | |
| Data transfer rate (KB/S) | 625 | | | | | | |
| Access time (ms) (including settling time) | | | | | | | |
| Minimum | 18 | | 18 | | 15 | 10 | |
| Average | 95 | | 88 | | 45 | 35 | |
| Maximum | 235 | | 205 | | 95 | 60 | |
| Average latency time (ms) | 8.3 | | 8.5 | | 8.3 | | |
| Functional | | | | | | | |
| Rotational speed (RPM) | 3600 | | 3543 | | 3600 | | |
| Recording density (BPI) | 9060 | | 10200 | | 12500 | 9600 | |
| Track density (TPI) | 362 | | 298 | 596 | 450 | 793 | 831 |
| Cylinders | 320 | | 640 | | 306 | 699 | 754 |
| Disks | 2/3 | 4 | 2 | | 2/3 | 4 | 6 |
| Start up time (S) | 12(typ) | | | | | | 15(typ) |
| Operating environment | | | | | | | |
| Temperature | 5 to 45°C (41 to 113°F) | | | | | | |
| Relative humidity | 8 to 80%RH | | | | | | |
| Wet bulb maximum | 25°C (78°F) Non-condensing | | | | | | |
| Altitude | 0 to 3000m (0 to 10000ft) | | | | | | |
| Power requirements | | | | | | | |
| DC voltages +12V±5% | 1.6A (typ) | | 1.4A (typ) | | 0.6A (typ) | 2.0A (typ) | |
| +5V±5% | 4.3A (max) | | 2.0A (max) | | 2.0A (max) | 4.5A (max) | |
| | 1.0A (typ) | | 1.0A (typ) | | 0.5A (typ) | 1.5A (typ) | |
| Physical | | | | | | | |
| W x D x H (mm) | 146 X 203 X 83 | | 146 X 203 X 41.3 | | 101.6 X 146 | 146 X 203 X 83 | |
| Weight (kg) | 2.5 | | 1.4 | | 1.0 | 3.0 | |
| interface | ST506/412 | | | | | | |
| Access mechanism | Rotary Stepper | | | | | Rotary VCM | |



Head Office: ELECTRONICS & BUSINESS MACHINE DEPT. C. ITOH BLDG, 5-1, Kita-Aoyama 2-chome, Minato-ku, Tokyo, 107 JAPAN
Tel: (03) 497-3160 Telex: (KDD) J22295, J22296, J22297 Cable: CITOHTOKYO

C. ITOH ELECTRONICS GROUP



TOHOSEIMEI BLDG. 27F 2-15-1, SHIBUYA, SHIBUYA-KU, TOKYO 150, JAPAN
Tel: (03) 486-5821 Telex: 2427268 CIETOK J J22 295 ITOHCHU

C. ITOH ELECTRONICS INC.

P.O. Box 66903, 5301 Beethoven Street
Los Angeles, CA 90066
Tel: (213) 306-6700
Telex: WU 65-2451 ANS B. CIE LSA
TWX910-343-7746 ANS B. CIELEC LSA
Facsimile: (213) 390-1188

C. ITOH ELECTRONICS CO., LTD.

Beacon House
26-28 Worple Road
Wimbledon SW19 4EE
United Kingdom
Tel: (01) 946-4960
Telex: 895-5616

C. ITOH ELECTRONICS G.M.B.H.

Roßstraße 96, 4000
Düsseldorf, 30, W. Germany
Tel: (0211) 45498-14
Telex: 8584102 CIED

C. ITOH ET CIE

(BRITE INTERNATIONAL)
Tour Maine Montparnasse
33, Avenue du Maine
75755 Paris Cedex 15, France
Tél: (538) 24-00
Telex: 200140