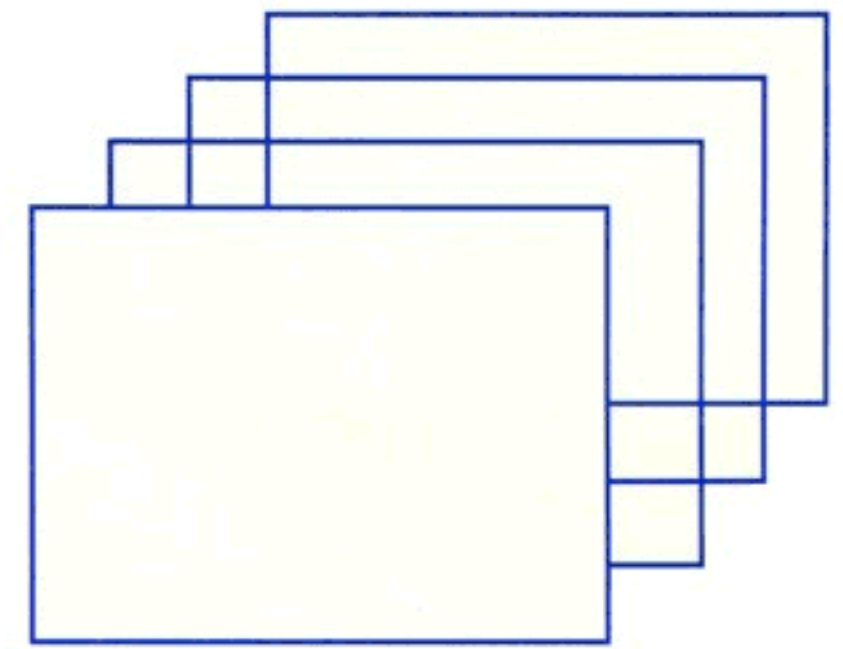


Aperture Card Duplicator Systems



Wicks and Wilson Limited
Electronic Imaging and Micrographics



CD Range of Aperture Card Duplicators

Wicks and Wilson have been the premier designers and manufacturers of aperture card duplicators for more than twenty years. Today, a range of equipment is available which can meet all possible duplication and distribution system needs.

With all the experience gained from making duplicators for most major engineering companies world-wide, we are now able to offer a range of models which will meet all practical user requirements.

WICKS AND WILSON APERTURE CARD DUPLICATORS FOR ALL SYSTEMS

- **Automatic interleaving of Master Cards or Slave Cards into Copycard decks**
- **Variable Distribution Programming**
- **Automatic Operation of On-Line and Off-Line Punching and Printing**

The Wicks and Wilson range of duplicators and associated software allows the user to select a duplicating system that is designed to fit their card and data distribution requirements. This flexibility, and particularly the interleaving feature, effectively reduces operating costs in a wide variety of card systems. These may be when:

- **Master cards or copycards are, or are not, punched**
- **Copycards are pre-punched**
- **Copycards are punched after image duplication**
- **Image duplication, punching and printing are performed in one process**
- **Slave cards are used for controlling the number of copycards or for transferring punched data to copycards.**
- **Camera cards are punched during the duplication process.**

OPERATION

Operation of all the machines is simple and is started by loading master cards and copycards into the hoppers at the right-hand side of the machine.

The CD10 and the CD20 are controlled by the keyboard of the attached PC controller. Apart from the extensive operational control which the software provides, there are also facilities for the preparation of various control files, diagnostic routines, the provision of report logs and a run time progress display.

In all the duplicators, the copycards are exposed by an ultraviolet light source and developed by anhydrous ammonia gas. The used gas is exhausted into an absorber solution (which is mainly citric acid and which is environmentally friendly).

FULL CARD REPRODUCERS

CD10 Aperture Card Duplicator

This duplicator can duplicate, punch and print a preset number of copycards from each master card at a speed of 1,000 cards per hour. It is operated by an attached PC controller which makes a host of facilities available for the production of volumes of copycards. The Distribution Control Software for the CD10 (DCS10) is an advanced and very comprehensive application developed over many years by Wicks and Wilson for the flexible and extensive control of the production of duplicate aperture cards for distribution. Sets of cards, with or without punched and printed addressing, can be made from local fixed or variable distribution address files which can be created by the user one time only or which may be prepared by another computer on a job by job basis to be sent to the CD10 via a network. Alternatively, slave cards interleaved with master cards can be used to control punching, printing and fixed or variable distribution. The punching and printing on the copycard can be exactly the same as in the master card or columns can be interchanged or omitted and sequential numbers can be added to copycards. Both 80 and 60 position printing is available and the punching and printing can be patched independently.

The CD10 will read any two columns punched in the master card or in a slave card to control the number of copycards to be made from that card - these holes can be omitted from the copycards. Punching and printing operations are independently selectable by the DCS10 software. Copycards can be punched and printed, punched only or printed only. Master cards can also be punched or printed, or both, immediately following the copycard duplication. There are also various slave card control modes, printed log files and many other features are available and are explained in the DCS10 documentation.

CD20 Aperture Card Duplicator

Exactly the same functionality as the CD10 but at a higher speed of 1,800 cards per hour. A special high speed punch unit provides almost twice the speed of the CD10.

CC1 Aperture Card Collator

This collator is designed to fit underneath the CD10 or CD20 Duplicators to receive the copycards direct from the reproducer and to arrange them into sorted or collated sets. There are 25 active bins with one reject bin and each bin can hold up to 200 cards making a total capacity of 5,000 cards when full. As with the reproducers, the DCS10 software provides a number of very flexible sort and collation modes complete with slave card and master card separation.

DCS10 DISTRIBUTION CONTROL SOFTWARE

This software provides full distribution control and automation.

- **VARIABLE DISTRIBUTION**
Sets of cards may be made in quantities and with addresses which change from job to job by using a different distribution file each time.
- **FIXED DISTRIBUTION**
Sets of cards may be made in quantities and addresses which do not change and which are taken from the same distribution file for each job.
- **MIXED DISTRIBUTION**
A combination of variable job distribution with fixed address and quantity details.
- **FULL COLLATOR CONTROL**
In addition to Sort and Collate modes, each bin may hold cards for one address only.
- **TOTAL SOFTWARE CONTROL**
All the features described for the CD10 and CD20 become available under software control.

FEATURES

The CD10 and CD20 Reproducers provide advanced features

- **AUTOMATIC REPRODUCTION**
Fully automatic duplication of master card including reproduction of punched data.
- **ULTRA HIGH QUALITY IMAGING**
Exceptionally high quality reproductions (up to 200 lines/mm)
- **HIGH SPEED**
1,000 or 1,800 cards per hour
- **COPYCOUNT SET BY A CARD**
The Hollerith punching in a master card or slave card may be used to set the copy count.
- **PUNCHED DATA FROM MASTER OR SLAVE**
Punched and printed data may be taken from the master card or from the slave card when masters are not punched.
- **AUTOMATIC SEQUENTIAL NUMBERING**
Can add serial number to each copycard as a primitive address.
- **AUTOMATIC SEPARATION**
Master and copycards delivered to separate hoppers.
- **AUTOMATIC PATCHING**
Columns can be repositioned or omitted in punching and printing independently.
- **PUNCH THE MASTER CARD**
Master card can be punched after its copycards if data is taken from a slave card.
- **COLLATOR CONTROL**
Built in.
- **EXPOSURE TEST FACILITY**
Provision of a simple routine to determine the best exposure.
- **PRECISE REGISTRATION**
Registration of master card to copy card with ± 0.3 mm in both directions.
- **POSITIVE CARD FEED**
Reliable card feed avoiding jamming and misfeeds.
- **LONG LAMP LIFE**
400 hours in both machines.
- **OFFICE ENVIRONMENT**
The anhydrous ammonia developing system does not require venting and can be used in a normal reproduction department.
- **PROVEN PERFORMANCE**
Thousands of similar machines have been sold world-wide.

The CC1 Collator makes distribution easier

- **FITS TO CD10 OR CD20**
The CC1 fits underneath either of these duplicators to provide in-line sorting and collating facilities.
- **CONTROLLED FROM THE DUPLICATOR**
Control is easy and appears as extra functions on the duplicator control panel.
- **HUGE CAPACITY**
Each bin can hold 200 copycards and there are 25 active bins plus a reject bin (or master card bin).
- **COLLATE MODE**
All the copies from each master card are placed into a separate bin.
- **SORT MODE**
One copy from each master card is placed into a different bin.
- **SLAVE CARD REJECT HOPPER**
An additional hopper is provided to separate slave cards out of the system.

CARD ENCODING

All aperture cards need to be encoded in some way for access and ease of use. For those systems which cannot justify a Full Card Reproducer, Wicks and Wilson can offer a lower cost alternative:

CP1 Keypunch/Encoder

The CP1 is a separate keypunching unit which is driven by software running in an attached PC controller. Cards may be punched before or after image duplication. An ideal solution for a smaller system is to punch the master cards in the CP1 before duplication, duplicate them in the required quantity, deliver them interleaved back to the CP1 which will transfer the master card punching onto each of its succeeding copycards automatically.

In addition, the CP1 is a card reader which can be used to provide files of data of the punching contained in decks of cards. These can be useful for a wide range of management tasks.

The CP1 Keypunch/Encoder adds punching and printing

- **STANDARD HOLLERITH ENCODING**
Provides standard Hollerith punching with 60 or 80 position printing.
- **ACCEPTS INTERLEAVED DECKS**
Uses a deck of interleaved cards to encode the copycards automatically. Data from a punched card is read and used to punch all the following copycards until another punched card occurs.
- **DATA FROM MASTER OR SLAVE CARD**
The data can be provided by a master card or by a slave card.
- **KEYPUNCH MODE**
Can be used to keypunch blank cards of any type from hand keyed data.
- **FILE PUNCHING MODE**
Can be used to punch and print cards of any type from data provided in a data file.
- **CARD READING MODE**
Can be used to read decks of cards of any type and to create a data file of the Hollerith punching.

INTERFACING

Interfacing to the CD10 and CD20 duplicators is via a network and is controlled by the DCS10 software. Complete data files are transferred to the duplicator from a source within the user's system. Suitable standard network hardware and software are installed by the user so that they are automatically started when the machine is turned on. For optimum performance the network should be able to accept the data at the rate it is generated; however, the system will automatically adjust itself to the speed of slower or heavily loaded networks.

TECHNICAL DATA

| | | CD10 | CD20 | CP1 | CC1 |
|--|---------------------------|------------|---------|---------|---------|
| Hopper capacities | cards | 1,000 | 1,000 | 500 | 200 |
| Main output hopper | cards | 1,000 | 1,000 | 250 | — |
| Read output hopper | cards | — | — | 500 | — |
| Number of bins | | — | — | — | 25 |
| Reject hopper capacity | cards | — | — | — | 200 |
| Maximum speeds | cards per hour | 1,000 | 1,800 | n.a. | 1,800 |
| Resolution | less than one target loss | yes | yes | — | — |
| Registration accuracy | mm | ±0.3 | ±0.3 | — | — |
| Lamp power | watts | 400 | 600 | — | — |
| Minimum lamp life (20% fall) | hours | 400 | 400 | — | — |
| Warm-up time | less than (minutes) | 4 | 4 | 0 | 0 |
| Card counter | 0-999999 | yes | yes | no | no |
| Machine noise | maximum dBa | 72 | 72 | 68 | 72* |
| Size | long mm/inches | 1963/77 | 1963/77 | 970/38 | 1963/77 |
| | wide mm/inches | 666/26 | 666/26 | 380/15 | 666/26 |
| | high mm/inches | 590/23 | 590/23 | 440/17 | 406/16 |
| Weight - | Kg/lbs | 221/487 | 221/487 | 36/80 | 136/300 |
| Generation of microfilm | odd or even | | | | |
| Diagnostics - | in software | | | | |
| Ambient temperature | 15-27°C (60-80°F) | | | | |
| Humidity | 40% to 60% RH (non c) | | | | |
| Air quality | normal office | | | | |
| Ambient light level | up to 100ft candles | | | | |
| Storage | -40°C to +60°C | | | | |
| | 10% to 85% RH (non c) | | | | |
| Voltage (nominal) | V | 220/240 | 220/240 | 110/240 | 220/240 |
| Current consumption (at above voltage) | A | 5 | 8 | 1/0.5 | 15 |
| Supply outlet requirement | A | 13 | 13 | 10/13 | 13 |
| Transformer for 110/115 VAC | | no | no | — | no |
| Frequency | 47-63Hz | | | | |
| Input VA | maximum (excl. inrush) | all models | | | |
| Hold-up | ms at nominal voltage | 500 | | | |
| Approval plans | UL/FCC - USA | 20 | | | |
| | IEC/VDE - Europe | all models | | | |
| | | all models | | | |

* with duplicator attached

Wicks and Wilson manufacture a wide range of aperture card duplicators, scanners, plotters and a scanner-plotter which cover all the requirements for the duplication and conversion of aperture cards to digital data and vice-versa.

Wicks and Wilson Aperture Card Duplicators

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