HELL

Digiset LS 210 — Full Color Pages from the Laser Exposer

Dr.-Ing. Rudolf Hell GmbH
Marketing
Telephone 4 31/2 11-0
Telex 2 92 858
Telecopier 4 31/2 11-13 80

(2e-O-8906) - Printed in West Germany
Bestell-Nr. 2943204

LASER PRODUCT
CLASS 1

HELL

Digiset LS 210 — Full Color Pages from the Laser Exposer

Vom MG zum Porsche

High-S

James Dean war er zu langsam ... und doch wurde der Speedster in den fünfziger Jahren zum Kultobjekt der Amerikaner.

Alles begann mit Max Hoffman, der in den fünfziger Jahren Porsche-Importeur für die USA war. Hoffman hatte ein feines Gespür für die Autoträume seiner Zeit: Viele der jungen Amerikaner wünschten sich einen sehr schnellen, offenen Sportwagen, mit dem sie auf Hollywoods Sunset Strip Furore machen konnten, der aber gleichzeitig genügend überlegene Technik aufwies, um mit ihm bei Produktionswagenrennen an den Start zu gehen.

Speedster

Der Markt war damals mit entsprechenden Top-Modellen nicht gerade reichhaltig bestückt. Zwischen dem kleinen, relativ billigen MG und dem extrem teuren Jaguar klaffte eine Lücke, die Hoffman mit einem Porsche-Modell in der 3000-Dollar-Klasse zu füllen hoffte.

Die Zuffenhausener Fabrik stieg ein und bot ab 1954 speziell für den amerikanischen Markt den Speedster an. Er wurde in verschiedenen Versionen gebaut: 1954 und 1955 mit einem 1,5-Liter-Hubraum sowie nach Wahl mit einem 3000er starken Normalmotor oder dem 110 PS starken S-Motor. Während dieser Speedster dem damaligen 356 ähnelte, wurde dann ab Oktober 1955 ein auf dem neuen und verbesserten Typ 356 A basierendes Modell auf den Markt gebracht. Seine Kennzeichen: 1,6-Liter-Hubraum und 60 PS bzw. 75 PS bei der Version 1600 Super.

Viele Amerikaner schlossen diesen sportlichen Deutschen schnell ins Herz. Rund 4800 Exemplare wurden zwischen 1954 und 1959 verkauft — zu einer viel höheren Produktion konnte sich Porsche jedoch nicht entschließen.

Mit genauso viel Temperament, wie er den amerikanischen Markt eroberte, wirbelte der Speedster auch den Rennsport in den USA durcheinander. Das Reglement der SCCA (Sports Car Championship Association) schrieb vor, daß die an den Produktionswagenrennen teilzunehmenden Fahrzeuge vor allem serienmäßig zu sein hatten. Diese Bedingung konnte der Speedster erfüllen, und da er rund 70 kg weniger wog als

Kultobjekt

jedes Porsche-Cabrio, sogar noch 50 kg weniger als das Coupe, war er damals der ideale Rennwagen.

Der Speedster siegte überall sehr souverän und deklassierte den bis dahin in der 1,5-Liter-Klasse favorisierten MG auf so dramatische Weise, daß sich die SCCA gezwungen sah, eine neue Klasse für die MG-Sport-

Wann immer sich heute Porsche-Fans treffen — und es gibt Enthusiasten auf allen Kontinenten, die regelmäßig zusammentreffen — stehen die noch erhaltenen Speedster im Mittelpunkt. Sie sind umgeben von der Aura der optimistischen fünfziger Jahre, sind gleichsam Symbol für Jugend und Zeitgeist.

Dem Ex-Rennfa
to-Produzenten
gehört der au
gezeigte Spe
Jahre 1955. A
Super«, de
Zeit allerstä
Ausführun
14 Sekun
km/h be
erreicht
schwin

echten Sportw
nommen. Auc
tion ist sport
die körperge

Amerik

Sitzschale
sterung a
gesehen
festen

AUTOMOBIL MAGAZIN

NR. 11

AUTOTRÄUME

Vom MG zum Porsche

High-Speed.....

James Dean war er zu langsam ... und doch wurde der Speedster in den fünfziger Jahren zum Kultobjekt der Amerikaner.

Alles begann mit Max Hoffman, der in den fünfziger Jahren Porsche-Importeur für die USA war. Hoffman hatte ein feines Gespür für die Autoträume seiner Zeit: Viele der jungen Amerikaner wünschten sich einen sehr schnellen, offenen Sportwagen, mit dem sie auf Hollywoods Sunset Strip Furore machen konnten, der aber gleichzeitig genügend überlegene Technik aufwies, um mit ihm bei Produktionswagenrennen an den Start zu gehen.

Speedster

Der Markt war damals mit entsprechenden Top-Modellen nicht gerade reichhaltig bestückt. Zwischen dem kleinen, relativ billigen MG und dem extrem teuren Jaguar klaffte eine Lücke, die Hoffman mit einem Porsche-Modell in der 3000-Dollar-Klasse zu füllen hoffte.

Die Zuffenhausener Fabrik stieg ein und bot ab 1954 speziell für den amerikanischen Markt den Speedster an. Er wurde in verschiedenen Versionen gebaut: 1954 und 1955 mit einem 1,5-Liter-Hubraum sowie nach Wahl mit einem 55 PS starken Normalmotor oder dem 70 PS starken S-Motor. Während dieser Speedster äußerlich dem damaligen 356 ähnelte, wurde dann ab Oktober 1955 ein auf dem neuen und verbesserten Typ 356 A basierendes Modell auf den Markt gebracht. Seine Kennzeichen: 1,6-Liter-Hubraum und 60 PS bzw. 75 PS bei der Version 1600 Super.

Viele Amerikaner schlossen diesen sportlichen Deutschen schnell ins Herz. Rund 4800 Exemplare wurden zwischen 1954 und 1959 verkauft — zu einer viel höheren Produktion konnte sich Porsche jedoch nicht entschließen.

Mit genauso viel Temperament, wie er den amerikanischen Markt eroberte, wirbelte der Speedster auch den Rennsport in den USA durcheinander. Das Reglement der SCCA (Sports Car Championship Association) schrieb vor, daß die an den Produktionswagenrennen teilzunehmenden Fahrzeuge vor allem serienmäßig zu sein hatten. Diese Bedingung konnte der Speedster erfüllen, und da er rund 70 kg weniger wog als jedes Porsche-Cabrio, sogar noch 50 kg weniger als das Coupé, war er damals der ideale Rennwagen.

Kultobjekt

Der Speedster siegte überall sehr souverän und deklassierte den bis dahin in der 1,5-Liter-Klasse favorisierten MG auf so dramatische Weise, daß sich die SCCA gezwungen sah, eine neue Hubraumklasse für die MG-Sportwagen einzuführen.

Wann immer sich heute Porsche-Fans treffen — und es gibt Enthusiasten auf allen Kontinenten, die regelmäßig zusammentreffen — stehen die noch erhaltenen Speedster im Mittelpunkt. Sie sind umgeben von der Aura der optimistischen fünfziger Jahre, sind gleichsam Symbol für Jugend und Zeitgeist.

Dem Ex-Rennfahrer und Auto-Produzenten Erich Bitter gehört der auf diesen Seiten gezeigte Speedster aus dem Jahre 1955. Als Version »1500 Super«, der zur damaligen Zeit allerstärksten lieferbaren Ausführung, kann er in nur 14 Sekunden von null auf 100 km/h beschleunigen, und er erreicht auch eine Höchstgeschwindigkeit von 175 km/h, konkurrenzlos uns zu einer

Technische Daten	
Beschleunigung in s 0-100 km/h	6,1
Höchstgeschwindigkeit km/h	245
Verbrauch bei 90 km/h	6.8
120 km/h	9.0
im Stadtzyklus	13.6
Boxermotor Leistung in kw	170
in PS	231

Amerikaner

Sitzschalen, deren dünne Polsterung allenfalls als Alibi angesehen werden kann, geben festen Halt.

sich dann auch bei allen anderen der Sportwagenfahrer durchzusetzen begann. Die Oberkanten des Armaturenbretts sind äußerst spartanisch gepolstert, und schöne Steckscheiben in den Türen ersetzen die von allen anderen Porsche-Modellen schon altbekannten Kurbel-Fenster. Von Luxus ist nun wirklich keine Spur. Dieser Speedster ist für Leute, die Freude am Fahren haben.

Speedster-Piloten: Drehzahlen bei einem durchgedrückten Gaspedal möglichst oberhalb von 2500/min halten! Allerdings warnten bereits bei 4500/min rote Zeichen auf dem Drehzahl-Messer, dem Stoßstangen-Ventiltrieb nicht allzu viel zuzumuten.

Starten wir nun also zu einer Spritztour! Natürlich sind mit 70 PS keine Bäume auszureißen, aber der Speedster verlangt in allen Situationen ei-

LS 210 ... high speed und hohe Aufzeichnungsfeinheit!

Urkäfer-Tagen wohlbekannte Weisheit »Jubeln muß er!« gilt auch hier, denn die Kurbelwelle des Speedster-Motors, ein luftgekühlter Vierzylinder-Boxer, rotiert in vier Rollenlagern. Diese Rollenlager hatten es in sich, denn ein unwissender Fahrer, der nun meinte, sich einer niedertourigen und damit motorschonenden Fahrweise bedienen zu müssen, wurde äußerst Beispiel in den Kurven, wo er etwas zu wenig labil ist. Gegenlenken, Gas geben. Wenn dann der Fahrtwind um die Ohren saust und wir das Gefühl auskosten können, das schon unsere Väter spürten, als sie von diesem leichten, agilen Sportwagen schwärmten, so können wir das nun wirklich bestätigen: »Was ist schöner als Speedster-Fahren?!«

Besser fahren, besser s

Die neuen

Dimension

Besser fahren, besser s

Die neuen Dimension

Speed.....

gen Platz ge-
n die Sitzposi-
lich flach, und
recht geformten

aner

n, deren dünne Pol-
llenfalls als Alibi an-
werden kann, geben
all.

sich dann auch bei allen anderen der Sportwagenfahrer durchzusetzen begann. Die Oberkanten des Armaturenbretts sind äußerst spartanisch gepolstert, und schöne Steckscheiben in den Türen ersetzen die von allen anderen Porsche-Modellen schon altbekannten Kurbel-Fenster. Von Luxus ist nun wirklich keine Spur. Dieser Speedster ist für Leute, die Freude am Fahren haben.

Speedster-Piloten: Drehzahlen bei einem durchgedrückten Gaspedal möglichst oberhalb von 2500/min halten! Allerdings warnten bereits bei 4500/min rote Zeichen auf dem Drehzahl-Messer, dem Stoßstangen-Ventiltrieb nicht allzu viel zuzumuten. Starten wir nun also zu einer Spritztour! Natürlich sind mit 70 PS keine Bäume auszureißen, aber der Speedster verlangt in allen Situationen ei-

LS 210... high speed und hohe Aufzeichnungsfeinheit!

Urkäfer-Tagen wohlbekannte Weisheit »Jubeln muß er!« gilt auch hier, denn die Kurbelwelle des Speedster-Motors, ein luftgekühlter Vierzylinder-Boxer, rotiert in vier Rollenlagern. Diese Rollenlager hatten es in sich, denn ein unwissender Fahrer, der nun meinte, sich einer niedertourigen und damit motorschonenden Fahrweise bedienen zu müssen, wurde äußerst

Beispiel in den Kurven, wo er etwas zu wenig labil ist. Gegenlenken, Gas geben. Wenn dann der Fahrtwind um die Ohren saust und wir das Gefühl auskosten können, das schon unsere Väter spürten, als sie von diesem leichten, agilen Sportwagen schwärmten, so können wir das nun wirklich bestätigen: »Was ist schöner als Speedster-Fahren?!«

Technische Daten	
Beschleunigung in s 0-100 km/h	6,1
Höchstgeschwindigkeit km/h	245
Verbrauch bei 90 km/h	6,8
120 km/h	9,0
im Stadtzyklus	13,6
Boxermotor Leistung in kw	170
in PS	231

hrer und Au-
Erich Bitter
diesen Seiten
dster aus dem
s Version »1500
zur damaligen
rksten lieferbaren
g, kann er in nur
en von null auf 100
chleunigen, und er
ch eine Höchstge-
igkeit von 175 km/h,
konkurrenzlos.
d uns zu einer
ten ein

Digiset LS 210: Text/image laser recording for magazines and newspapers is now quicker, more colorful, more versatile.

Since the Digiset LS 210 outputs every page in top quality.
As a color separation or black/white. On photographic paper or inexpensive EDG line film.

Since the texts and images belonging to a page can be acquired separately by the Digiset LS 210 and then combined later to a final page in accordance with the positioning and design specifications.
That means: Considerable reductions in computer times in front-end and color systems.

Since the Digiset LS 210 uses simultaneous operation to avoid waiting times.
While one page is being exposed, the text and image data of other pages is being acquired and processed.

Since the Digiset LS 210 can be controlled unproblematically and in many different ways via various interfaces.
Hell provides users with the necessary interface documentation.

Since the Digiset LS 210 can be linked to the NewsPlan station and the Chromacom electronic image processing system from Hell.
For example: For up-to-the-minute image acquisition from television, facsimile transmitters, video cameras or scanners.

Digiset LS 210: Text/image laser recording for magazines and newspapers is now quicker, more colorful, more versatile.

Since the Digiset LS 210 outputs every page in top quality.
As a color separation or black/white. On photographic paper or inexpensive EDG line film.

Since the texts and images belonging to a page can be acquired separately by the Digiset LS 210 and then combined later to a final page in accordance with the positioning and design specifications.
That means: Considerable reductions in computer times in front-end and color systems.

Since the Digiset LS 210 uses simultaneous operation to avoid waiting times.
While one page is being exposed, the text and image data of other pages is being acquired and processed.

Since the Digiset LS 210 can be controlled unproblematically and in many different ways via various interfaces.
Hell provides users with the necessary interface documentation.

Since the Digiset LS 210 can be linked to the NewsPlan station and the Chromacom electronic image processing system from Hell.
For example: For up-to-the-minute image acquisition from television, facsimile transmitters, video cameras or scanners.

Digiset LS 210: Image Processor IP 100 and Laser Flatbed Recorder — For Perfect Full-Page Output

Perfect since the Digiset LS 210 is so versatile.
Total integration of the LS 210 into a typesetting system! That means: The functions of the typesetting system *and* the Digiset LS 210 can be monitored from the operating terminal of the typesetting system.

Perfect since the Digiset LS 210 has its own programs.
These relieve the typesetting system of time-consuming jobs, such as sorting text positions and color separations.

Perfect since organizational aids can also be exposed.
Register marks, color control strips, and date and time of exposure are generated automatically for further processing of the full-page films. Register holes are automatically provided for optimum register accuracy of the color separations.

Perfect since the Digiset LS 210 offers many design functions.
Texts can be rotated, freely positioned, reproduced screened or shaded, even in color. Either positive or negative. And image positions, masks, line frames of all types, circles and arcs are easily defined.

Perfect since the Digiset LS 210 is a color unit.
Tinting of headlines, texts or lines. Exposure of color screens for bases. Color screened type or logos, color images. In 16 colors. With different screen dot shapes. In 256 gray steps. Digiset LS 210 — for total integration of text and image: Since, for example, tinting of texts and fadeout of images at desired points is performed automatically "on the fly", i.e., while scanning is still underway.

Perfect since the Digiset LS 210 uses inexpensive film material.
The Digiset LS 210 offers you the possibility of using inexpensive EDG line argon-laser films. This results in considerable cost-savings for your business!

Perfect Data Processing for Text, Line and Halftone Images: The Image Processor IP 100

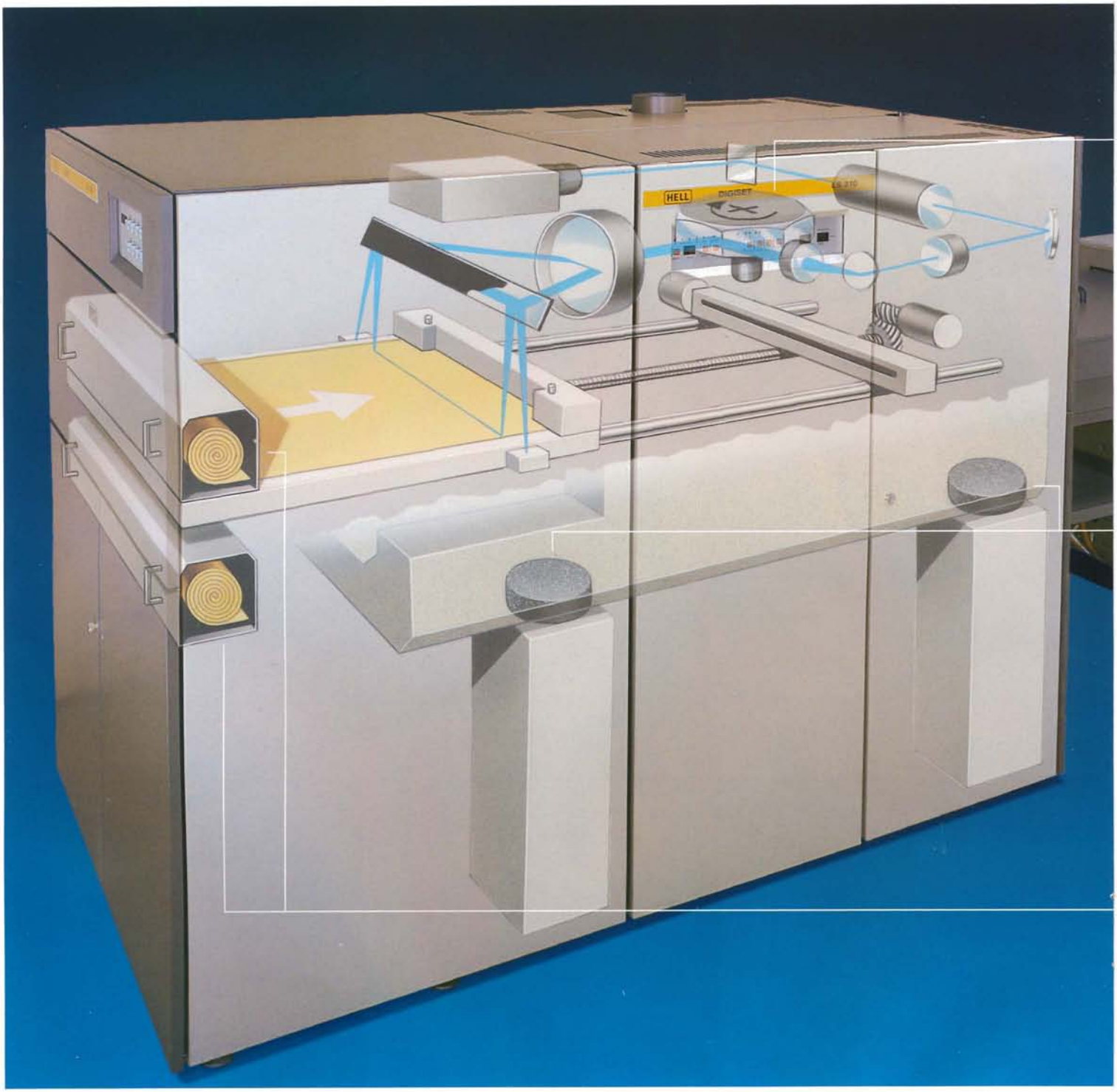
Speed and Perfection

The IP 100 processes the received text/image data and converts them into scan line signals for the exposure operation. A considerable quantity of data has to be processed and prepared for each scan line. That means over 15 million image elements per second for the higher resolutions. Or more than 1.5 billion image elements for one large-format newspaper page.

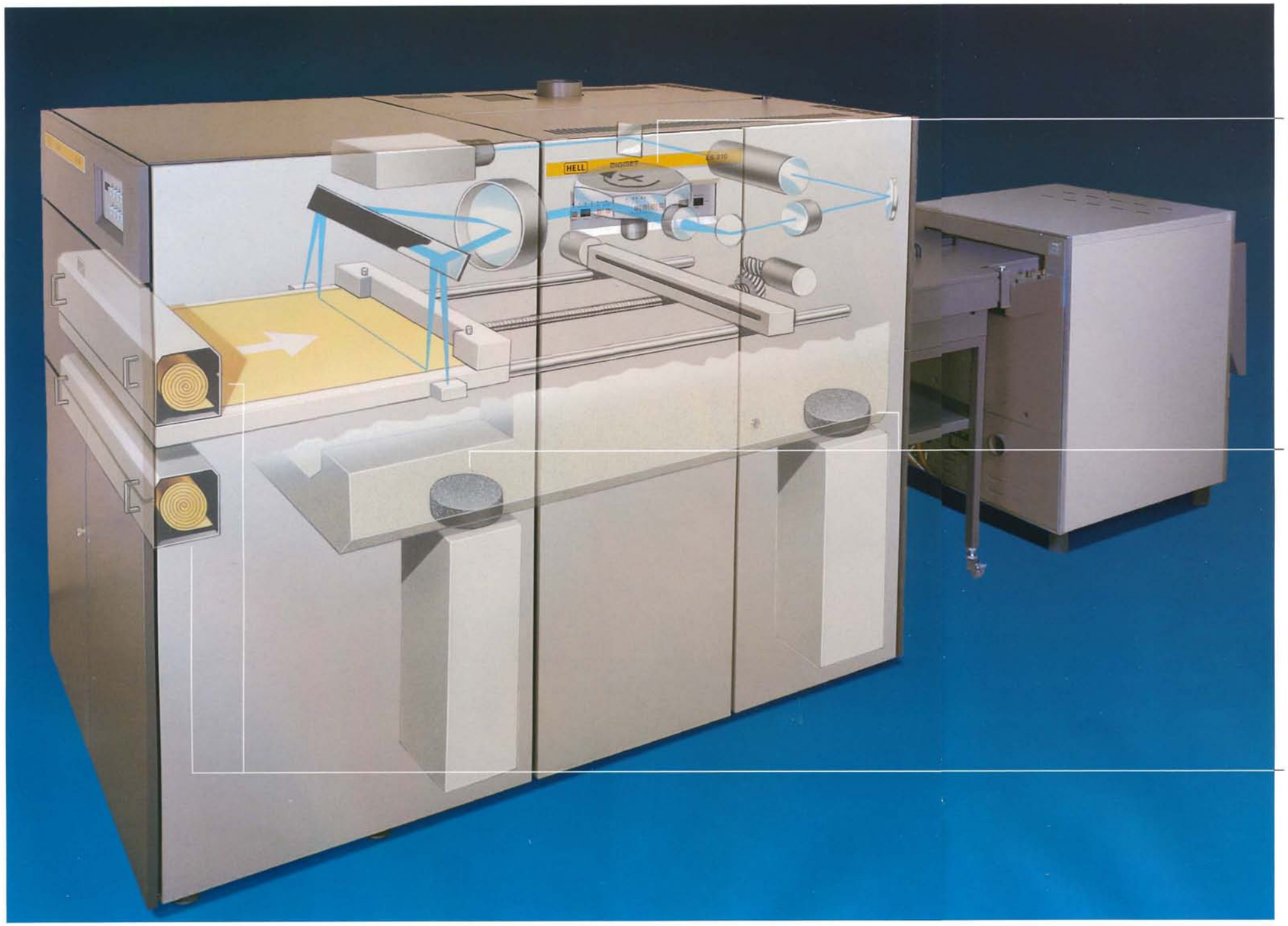
Capability for Interfacing a Proof Printer

A printer can be interfaced for outputting the processed data from the IP 100. This enables high-speed original output onto normal paper for correction purposes. Expensive photographic material is thereby saved.

Perfect Exposure Unit: The Laser Flatbed Recorder of the Digiset LS210

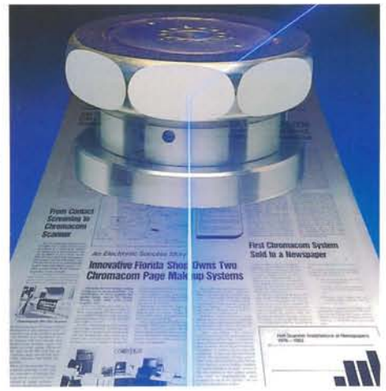


Perfect Exposure Unit: The Laser Flatbed Recorder of the Digiset LS 210



Compatible with the Pressfax System

The exposure unit of the Digiset LS 210 is identical to the recorder of the proven Pressfax system for full-page facsimile transmission and exposure onto photographic material or offset plates. This allows the Digiset LS 210 to be integrated into a Pressfax system – for razor-sharp recordings.



Top Quality Through Polygon Mirror

An octagonal polygon mirror deflects the laser beam eight times over the entire recording surface during a single revolution. This means 400 lines/s at a rotational speed of 3000 rpm. With ultrahigh precision and a beam deviation of only one millimeter over a distance of 1000 meters.

Precision Through Air Cushions

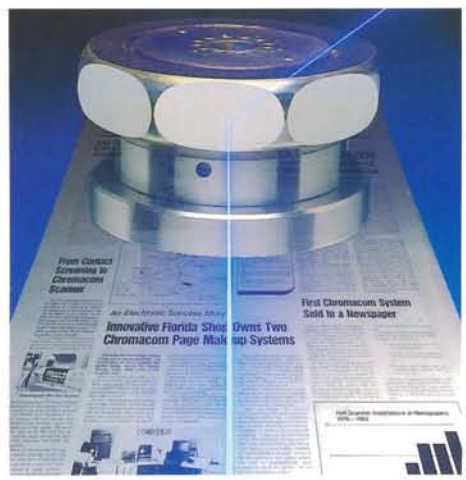
To prevent disturbances and ensure ultrahigh precision, the entire optical system of the recorder floats on air cushions. A transport carriage is used for continuously advancing the photographic material to be exposed.

Flexibility Through Rollfilm Station

The automatic rollfilm loading station has two cassettes, each with 60 m photographic material. If desired, each cassette can hold different materials and materials of different widths. For example: Wide material for newspaper and magazine double pages in cassette 1 and narrow material for magazine pages or jobbing work in cassette 2. The cassettes can also be exchanged by issuing an instruction from the front-end system.

Compatible with the Pressfax System

The exposure unit of the Digiset LS210 is identical to the recorder of the proven Pressfax system for full-page facsimile transmission and exposure onto photographic material or offset plates. This allows the Digiset LS210 to be integrated into a Pressfax system – for razor-sharp recordings.



Top Quality Through Polygon Mirror

An octagonal polygon mirror deflects the laser beam eight times over the entire recording surface during a single revolution. This means 400 lines/s at a rotational speed of 3000 rpm. With ultrahigh precision and a beam deviation of only one millimeter over a distance of 1000 meters.

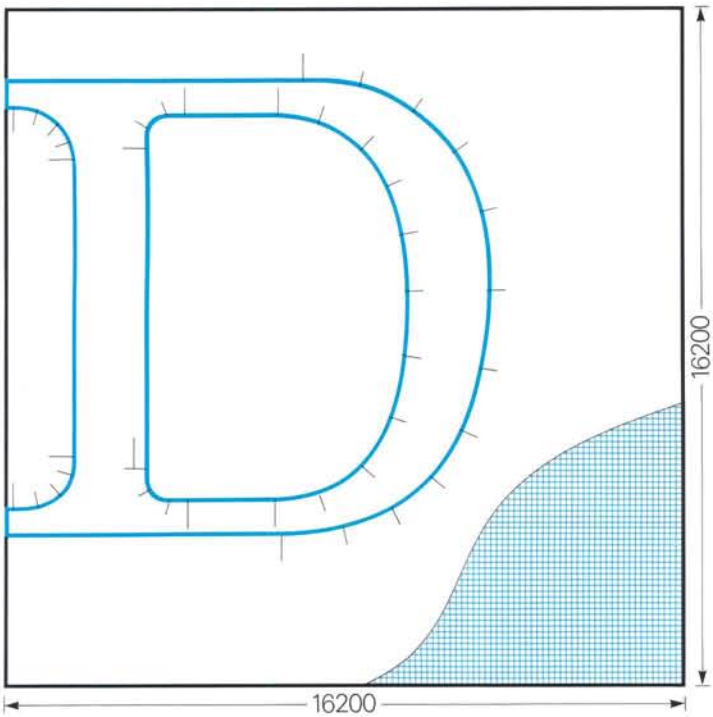
Precision Through Air Cushions

To prevent disturbances and ensure ultrahigh precision, the entire optical system of the recorder floats on air cushions. A transport carriage is used for continuously advancing the photographic material to be exposed.

Flexibility Through Rollfilm Station

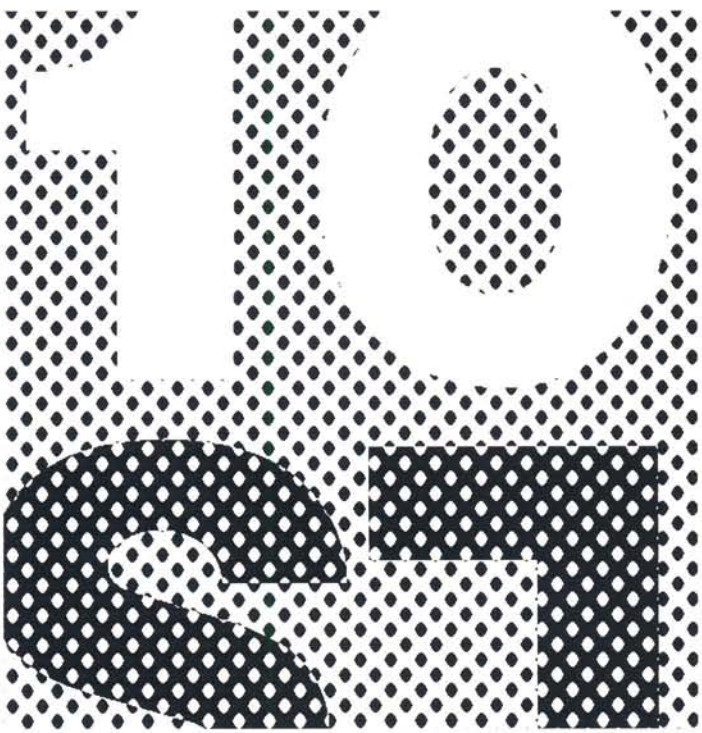
The automatic rollfilm loading station has two cassettes, each with 60 m photographic material. If desired, each cassette can hold different materials and materials of different widths. For example: Wide material for newspaper and magazine double pages in cassette 1 and narrow material for magazine pages or jobbing work in cassette 2. The cassettes can also be exchanged by issuing an instruction from the front-end system.

First Class:
The Recording Quality of the Digiset LS210



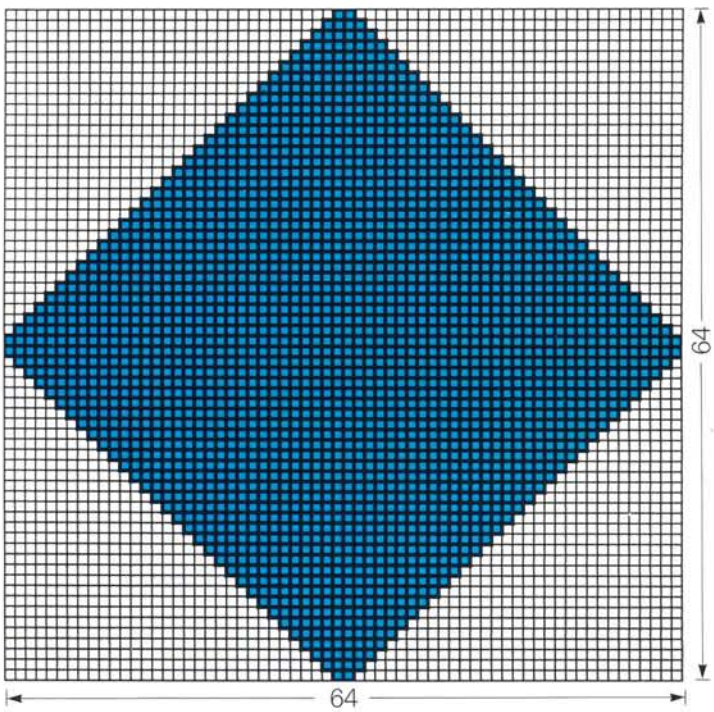
The Typeface Quality

The plus points:
High typeface quality and great depth of detail for the type design and side-bearings. 16200 x 16200 = more than 262 million positions are available in every em-quad for designing the character form.
The LS210 uses digital typefaces with outline coding. The contours are described by means of straight lines and arcs. Advantage: Even round character forms are reproduced in top quality.
More than 1000 different typefaces and a large symbol library more than satisfy the requirements of all application sectors.
Different type sizes can be produced by reducing the contour form. With absolute contour sharpness for all type sizes, from 4 to 511 points. Hell also provides typeface-specific width tables for excellent typography.



The Recording Quality

The texts and screen structures of a page are generated very quickly in a single operating process – and in optimum quality:
From a large number of horizontal scan lines.
With extremely high resolution.
At ultrahigh speed.
As color separation or black-and-white.
The resolutions used can vary between 360 and 800 lines per centimeter (840 to 2,000 lines/in.) depending on the typographical and printing requirements.
This applies for texts, line images, contone images and halftone areas. With razor-sharp contours.

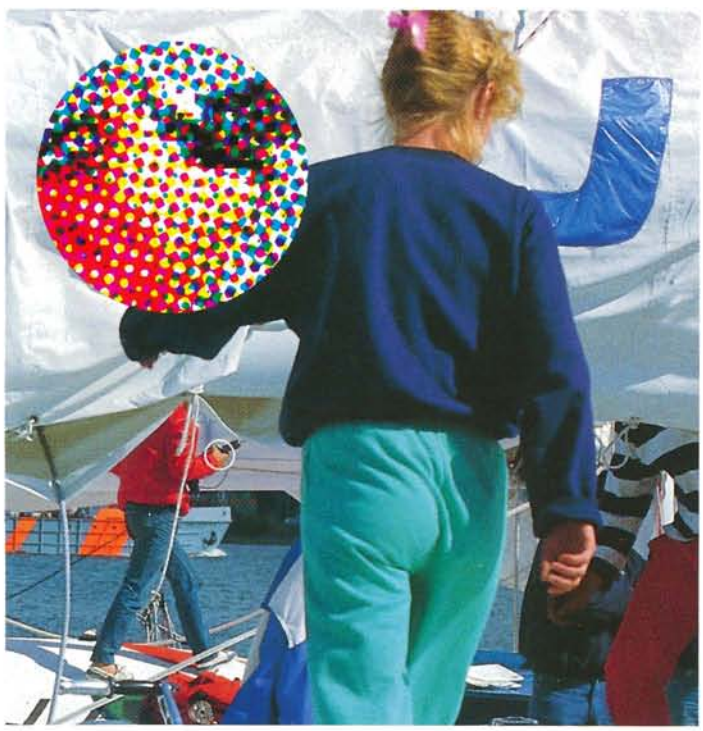


The Screen Dot Quality

All tint areas and halftone images are recorded using the patented screening process of Hell's proven color scanner technology. Various screen dot shapes are available: Round, elliptical or quadratic. This enables Hell to offer the optimum screen dot shape for different printing processes.

For all desired screen angles and different screen resolutions. In 256 gray steps.

The screen dots are stored in a high resolution in the Image Processor IP 100: With 64 x 64 minute elements per screen dot.



The Image Quality

Halftone images are generated by converting contone data during the output process.

With razor-sharp edges and image detail.

From "18" to "60" screens.

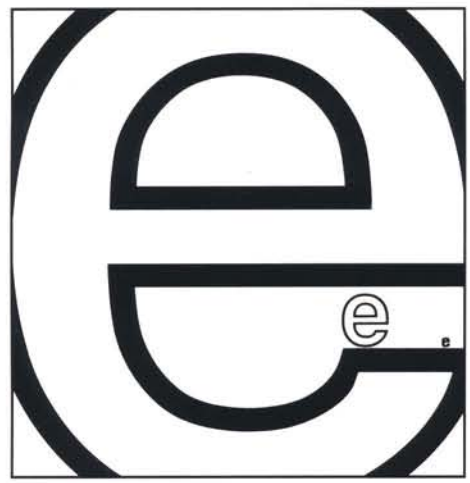
With a maximum of 256 possible density values.

In any size up to 483 mm × 635 mm (19 × 25 in.).

With enlargement and reduction capability.

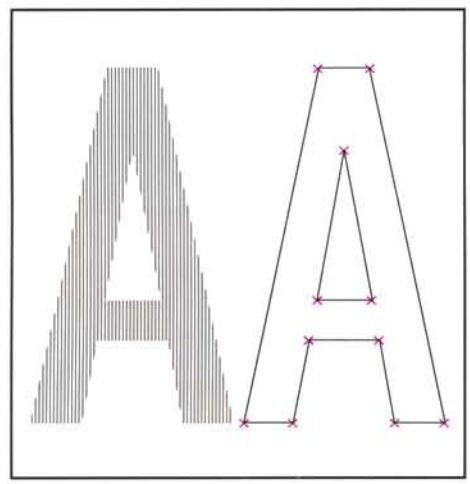
Wide Range of Design Possibilities for Text and Line Images

The Digiset LS210 offers exceptional design possibilities – in both color and black/white.



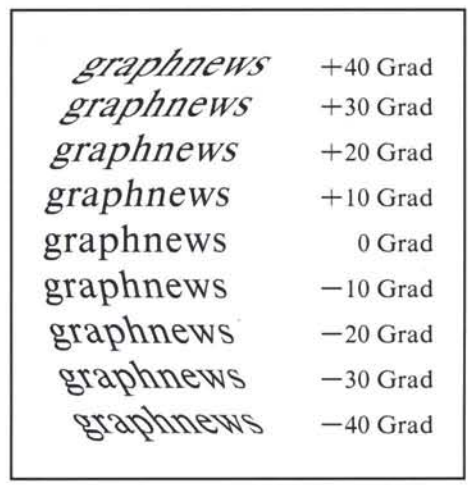
Large Selection of Typefaces
There are over 1000 typefaces. For any purpose. As individual typefaces or typeface packages. With a large library of special symbols.

Type Sizes for All Applications
Hell typefaces can be set from 4 to 511 points in steps of $1/128$ points.



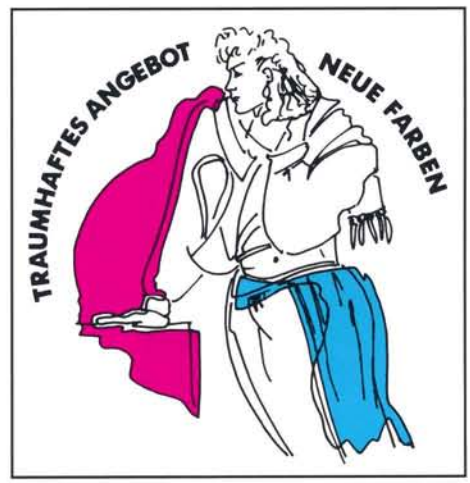
Optimum Side-bearings
The typesetting quality can be enhanced by using minimum values for positive and negative prewidths and postwidths. For example, by kerning critical character strings or generating ligatures.

From CRT to Laser Typefaces
Existing Digiset CRT typefaces and logos can be converted into the laser outline coding for the Digiset LS210. Another example of Hell compatibility!



Copying in
Text and image can be copied in both positively and negatively. In color, too. With sharp edges. And in any size.

Slanting
Every character can be slanted electronically. In finely stepped angles from minus 45 degrees to plus 45 degrees.
In steps of 0.5 degrees.

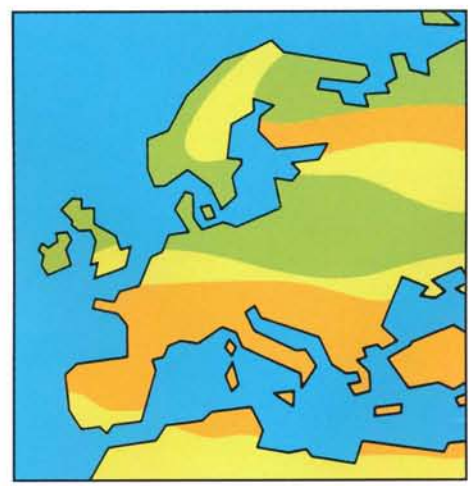


Shading
Simple or criss-cross shading can be generated with different line thicknesses and angles to produce special design effects. Even within individual characters.

Rotation
Individual characters, lines, text blocks or whole pages can be rotated in steps of $^{1}/_{128}$ degrees. With different angles.

Modification
Each character can be varied – in both height and width.

Lines and Frames
Lines and frames can be generated in any shape. With angular, round, elliptical or irregular form. In any thickness. Rotated, screened or shaded. In one or more colors.



Floating Accents
Floating accents are automatically positioned for optimum optical effect. Both above and below characters.

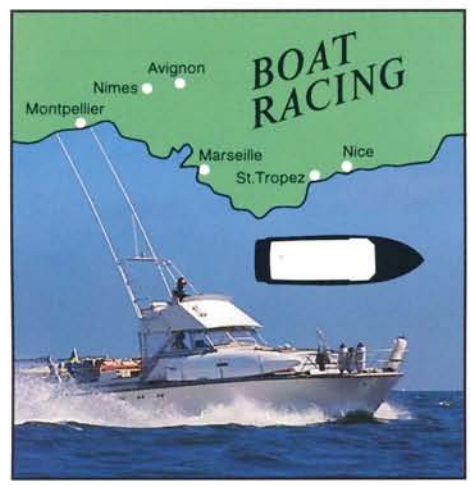
Multicolor Line Images
Line images acquired with a scanner can be positioned at any point, even overlapping text.
It is also possible to tint via masks.

Wide Range of Design Possibilities for Text and Image

The Digiset LS210 offers more: Text and image integration, masking and color reproduction.

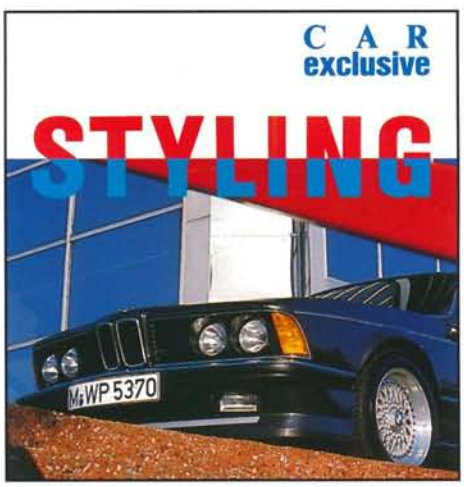
Screening
Screening of characters, logos, lines, line art and tints. With any screen resolutions and screen angles. In all tonal value gradations.

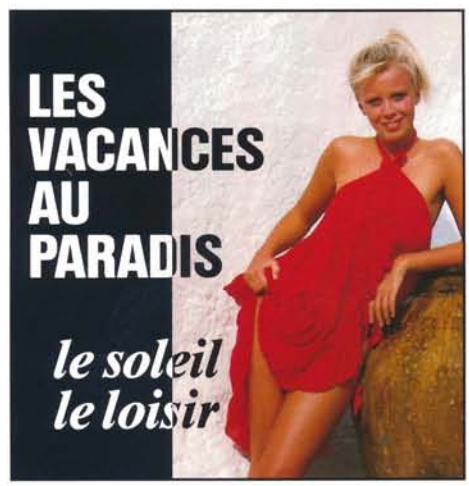
Combination of Images and Tints
Image in image, tint in image, tint in tint.



Tinting and Color Separations
Of texts, line and halftone images with up to 16 colors.

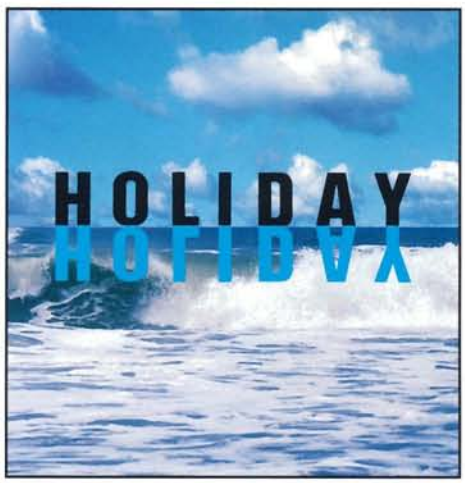
Superimposing
Superimposing of page elements in any desired form. For texts, lines, areas, line images and contone images.

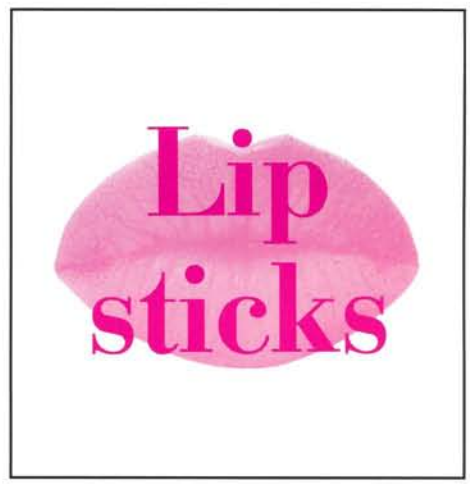




Copying in/out
Texts can be copied in or out of line and halftone images or tint areas.

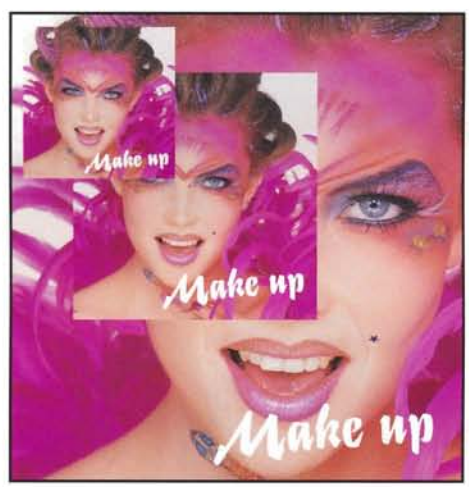
Reproduce Negatively
Characters, logos, lines, words, text blocks and even whole pages can be reproduced negatively. Without reversal development and without copying – in other words, without need for additional special films. It is possible to change from positive to negative within both text and image.





Right-Reading and Laterally Reversed
Texts can be set from left to right or vice versa. Right-reading or laterally reversed. Horizontally or vertically. In different typefaces and type sizes.

Screened Typefaces in the Image
One or more characters can be defined as a mask and stored as a screened image.



Shadow Effect
Generated by superimposing or masking.

Enlarging and Reducing
Texts, line and contone images can be enlarged by up to 200% or can be greatly reduced.

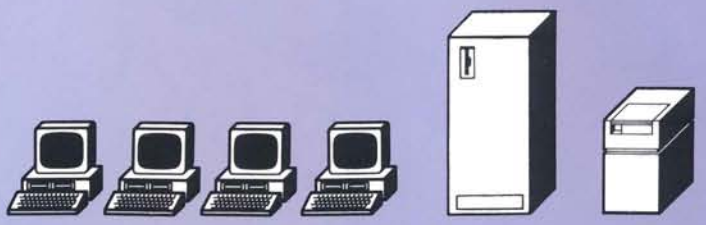
Outings On The Rhine

Outings and Cruises on the Rhine have always been a popular attraction, especially for tourists seeking romantic Germany. On its navigable length from Basle to Rotterdam there are a lot of idyllic places to visit.

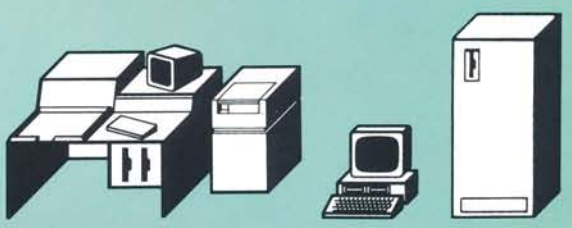
Bases
Every text or line image can be provided with a halftone area for a base. In color, too.

Rotation
Rotation of individual page elements. Even in halftone areas. Or in color.

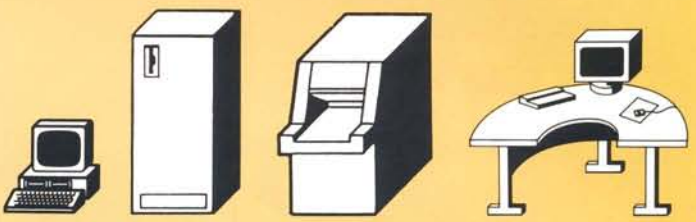
Text
from a Front-end System
Acquisition and processing on the DOSY or an alternative typesetting system. With or without design station. Transfer to the Digiset LS210.



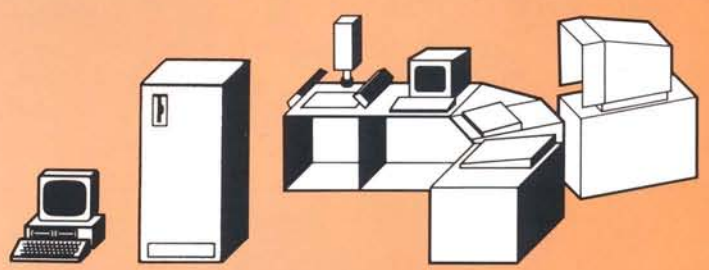
Text and Image
from a Front-end System
Line and halftone image processing on a single scanner. Text acquisition and processing on the DOSY or an alternative typesetting system. Make-up with or without design station. Transfer to the Digiset LS210.



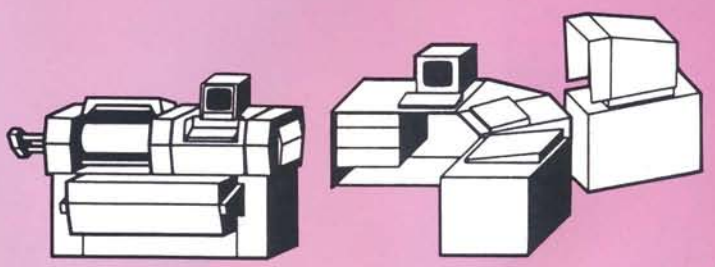
Text and Image
from the PagiCom
Text processing and design on a typesetting system. Image input via scanner. Text/image assembly and image processing on the monitor of the PagiCom network system. Transfer to the Digiset LS210.



Text and Color Image
Integration on the
News Plan
Text acquisition, design and make-up on a typesetting system. Transfer to NewsPlan. Scanning in of images with VideoScan camera, processing and positioning on the NewsPlan. Transfer to the Digiset LS210.



Color Images
from the Chromacom
Image acquisition on a system scanner. Image processing on the Combiskop of the Chromacom assembly and retouching station.
Transfer to the Digiset LS210.

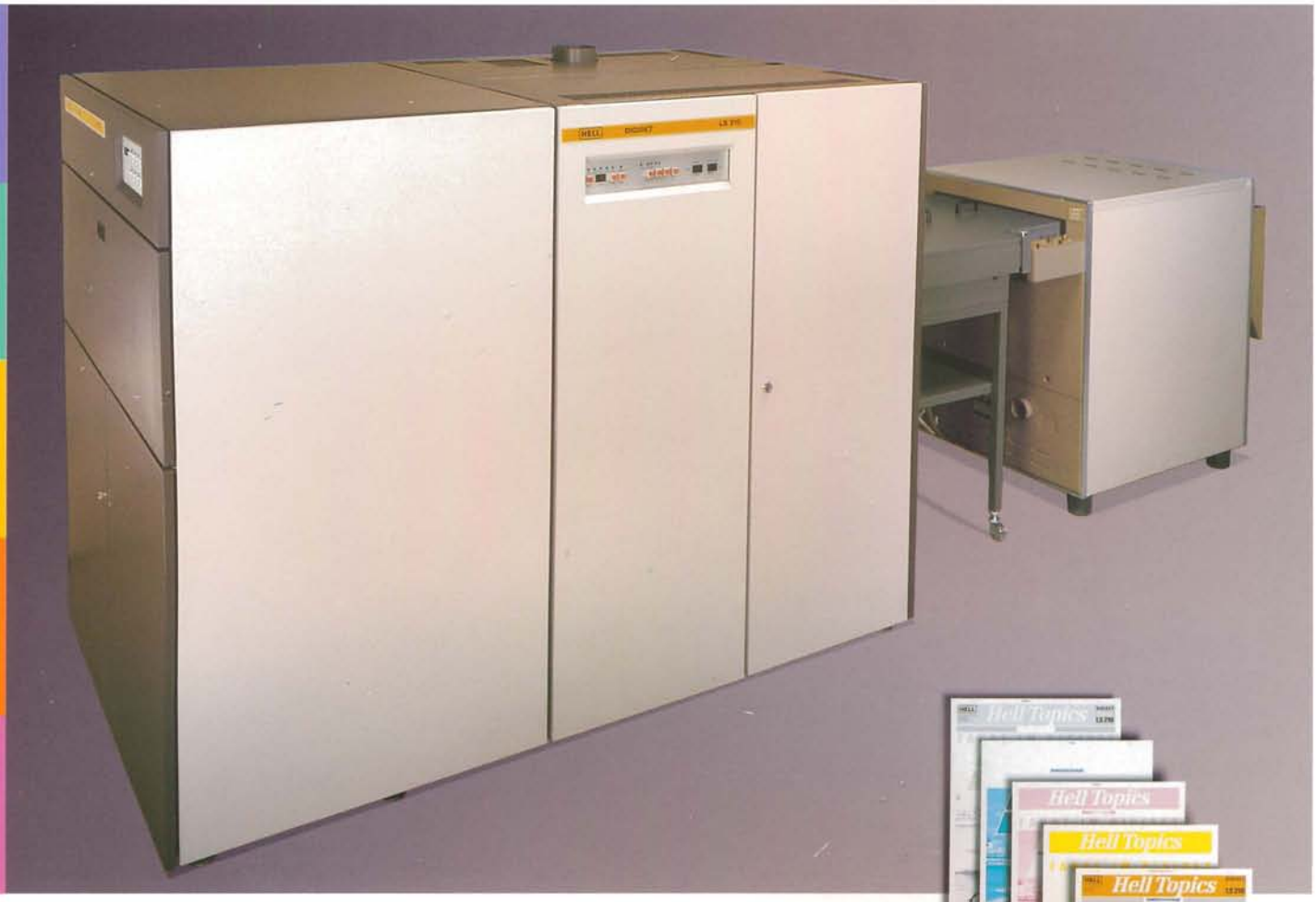


The Digiset LS 210: For Use in all Systems

Perfect Data Processing in the Image Processor IP 100

For text, line and halftone images. For converting all the text/image data of a complete page into scanning line signals in a single operating step. IP 100 – for extremely rapid output of image and text.

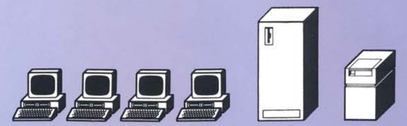
Highspeed Exposure
in the Laser Flatbed Recorder



For complete text/image pages of magazines, newspapers, catalogs and other printed matter.
As color separations or black/white.
With ultrahigh precision.
With recording resolutions from 360 to 800 l/cm, up to a "60" screen.
For recording formats up to 483 mm × 625 mm (19 × 25 in.).

Only One Minute Exposure Time per Color Separation!

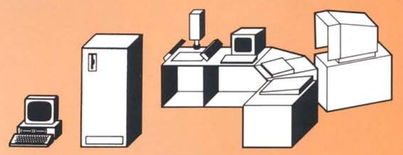
Text
from a Front-end System
Acquisition and processing on the DOSY or an alternative typesetting system. With or without design station. Transfer to the Digiset LS210.



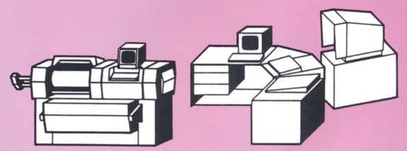
Text and Image
from a Front-end System
Line and halftone image processing on a single scanner. Text acquisition and processing on the DOSY or an alternative typesetting system. Make-up with or without design station. Transfer to the Digiset LS210.

Text and Image
from the PagiCom
Text processing and design on a typesetting system. Image input via scanner. Text/image assembly and image processing on the monitor of the PagiCom network system. Transfer to the Digiset LS210.

Text and Color Image
Integration on the
News Plan
Text acquisition, design and make-up on a typesetting system. Transfer to NewsPlan. Scanning in of images with VideoScan camera, processing and positioning on the NewsPlan. Transfer to the Digiset LS210.



Color Images
from the Chromacom
Image acquisition on a system scanner. Image processing on the Combiskop of the Chromacom assembly and retouching station.
Transfer to the Digiset LS210.

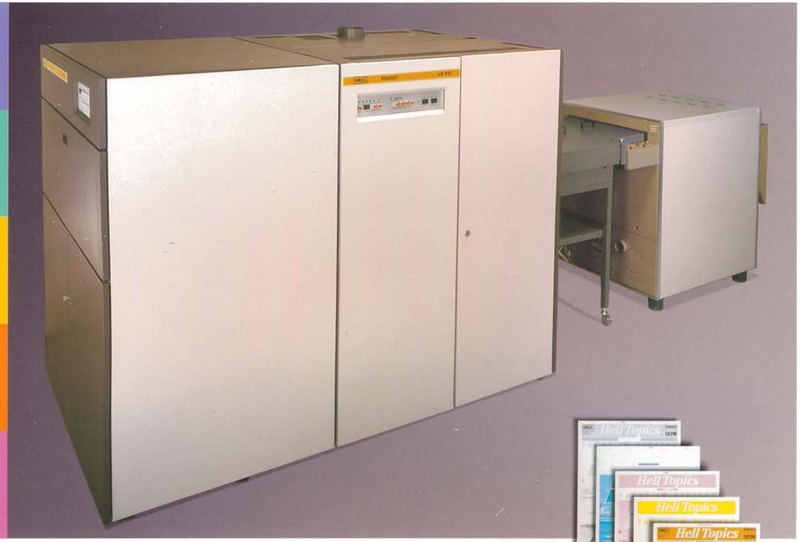


The Digiset LS210: For Use in all Systems

Perfect Data Processing
in the Image Processor IP100

For text, line and halftone images.
For converting all the text/image data of a complete page into scanning line signals in a single operating step. IP100 – for extremely rapid output of image and text.

Highspeed Exposure
in the Laser Flatbed Recorder



For complete text/image pages of magazines, newspapers, catalogs and other printed matter.
As color separations or black/white.
With ultrahigh precision.
With recording resolutions from 360 to 800 l/cm, up to a "60" screen.
For recording formats up to 483 mm × 625 mm (19 × 25 in.).

Only One Minute
Exposure Time per
Color Separation!

Technical Data

Recording format	Maximum 483 mm x 635 mm Maximum 107 cicero x 140 cicero Maximum 114 pica x 150 pica Maximum 19 inch x 25 inch
Recording resolutions (can be switched via command)	360 lines/cm; 914 lines/inch 400 lines/cm; 1016 lines/inch 500 lines/cm; 1270 lines/inch 540 lines/cm; 1372 lines/inch 600 lines/cm; 1524 lines/inch 720 lines/cm; 1829 lines/inch 800 lines/cm; 2032 lines/inch
Recording speed	667 mm/min (26.3 in./min.) at 914 lines/inch 600 mm/min (23.6 in./min.) at 1016 lines/inch 480 mm/min (18.9 in./min.) at 1270 lines/inch 444 mm/min (17.5 in./min.) at 1372 lines/inch 400 mm/min (15.7 in./min.) at 1524 lines/inch 333 mm/min (13.1 in./min.) at 1829 lines/inch 300 mm/min (11.8 in./min.) at 2032 lines/inch
Point sizes	For standard work: A size range of 4 to 511 point, in steps of $^1/_{128}$ point (can be adapted to specific customer) For particularly high quality: Side-bearings in 4 to 12 point, 12 to 32 point, 32 to 511 point
Unit system	200 units per em-quad
Expanded and condensed type	From 4 to 511 point up to 200 % of the type size in steps of $^1/_{128}$ point
Slanting	± 45 degrees, in steps of 0.5 degrees
Base line deflection	In steps of $^1/_{128}$ point
Photographic material transport	Continuously forward
Text rotation	0 to 360 degrees, in steps of $^1/_{128}$ degrees
Rules	Horizontal and vertical, any thickness in steps of $^1/_{128}$ point, rotable like text
Setting direction	From left to right, from right to left, also mirrored
Line structure	Horizontal or vertical
Available typefaces	Over 1000 typefaces
Characters per typeface	Max. 240 characters, over 32 000 characters for Asiatic typefaces

Accessible fonts	More than 1000 fonts on Winchester magnetic disk memories with 168 MB
Screen ruling	Up to 60 halftone dots/cm Up to 150 halftone dots/inch
Recording and screen resolution	≧ 12:1
Screen angle	As desired in steps of < 1 degree
Scale changes for images	10 to 200 %, in steps of 0.1 %, horizontal and vertical
Page output	Positive and negative, right-reading and laterally reversed
Photographic material	EDG film and RC paper
Photographic material sizes	In rolls of up to 50 m (RC paper) of up to 60 m (line film)
Photographic material magazine	For holding two supply cassettes
Photographic material securing method	Depression and customer-specific register pins
Dimensions (W x D x H) and weight	Image Processor: 776 mm x 700 mm x 1660 mm (30.6 in. x 27.6 in. x 65.4 in.) weight approx. 300 kg (661 lbs.) Flatbed recorder: 2220 mm x 1290 mm x 1660 mm (87.4 in. x 50.8 in. x 65.4 in.) weight approx. 2100 kg (4630 lbs.) Processor transfer channel: Distance recorder-processor approx. 800 mm (31.5 in.) Processor entry height: Either 1003 mm (39.5 in.) (standard) or 1150 mm (45.3 in.)
Power supply	Image Processor: 1/N/PE AC 220 V, 2 kW Flatbed recorder: 3/N/PE AC 380 V, 3 kW
Compressed air supply	7 to 10 bar absolute, with 30 liter/min air consumption under normal pressure
Environmental conditions	Operating temperature: 18 to 28° C Relative humidity: 50 to 80 %, without condensation

Dr.-Ing. Rudolf Hell GmbH
Marketing
Telephone 4 31/2 11-0
Telex 2 92 858
Telecopier 4 31/2 11-13 80

(2e-O-8906) - Printed in West Germany
Bestell-Nr. 2943204

LASER PRODUCT
CLASS 1

Dr.-Ing. Rudolf Hell GmbH
Marketing
Telephone 4 31/2 11-0
Telex 2 92 858
Telecopier 4 31/2 11-13 80

(2e-O-8906) - Printed in West Germany
Bestell-Nr 2943204

LASER PRODUCT
CLASS 1

HELL

Digiset LS 210 — Full Color Pages from the Laser Exposer