



PREPRESS

PRESS

POSTPRESS

# Primescan

Drum scanners in a class of their own

**HEIDELBERG**

## The benchmark class • The Primescan series reflects Heidelberg's position as the world leader in drum scanner technology and underlines its expertise in high-quality prepress color.

The new Primescan series leads the way in drum scanner technology and is based on over thirty years' experience in the design and further development of cutting-edge scanners.

The universal Primescan D 7100, D 8200 and top-of-the-range D 8400 models with fully automatic drum changer are the natural successors to the legendary DC 3000 series of scanners.

These multifunctional scanners for color applications and redigitizing analog originals in top quality and excellent productivity are at home in any printing shop, repro company, service bureau, publishing house or picture agency.



Mounting is simplicity itself – the new generation of Primescan drum scanners combines excellent performance with unrivaled ease of use.

## Quality in every detail • If you are looking to succeed in today's prepress, you need to produce excellent scanning results in the shortest possible time. The drum scanners in the Primescan series do precisely that.

The tried-and-tested drum scanner technology used by the Primescan family combines spot scanning with Newcolor 7000, the new high-end scanning software, to produce scans of unparalleled quality. The perfect interplay of all system components delivers superb scanning results. Three optimized special lenses and three highly-sensitive photomultipliers serving as image sensors are all concentrated simultaneously on a single image point. In conjunction with the powerful halogen lighting used for the original, this technology ensures the unbeatable image signal quality characteristic of the Primescan family. Details can be resolved in exceptional clarity, even in the darkest sections of the image. The light-sensitive lownoise photomultipliers provide smooth, extremely low noise image signals that are unique to the Primescan family. You can therefore rest assured that your scans will be exactly as you want them.

### Sharp in every detail

The new USM algorithms used by the Primescan family deliver superb results. Thanks to the 16-bit processing used throughout, the effect on the prescan and fine scan is the same. Settings such as detail contrast, selective smoothness and contour control have the same effect for both prescan and fine scan, ensuring the very highest quality throughout. Images which have already been scanned can therefore be sharpened later with complete ease. Whether you choose an automatic function or prefer to sharpen the images yourself using WYSIWYG control, you can always be sure to get the very finest results when it comes to image definition.



The Primescan series – upright design with modern styling. Never before has so much high technology needed so little space.

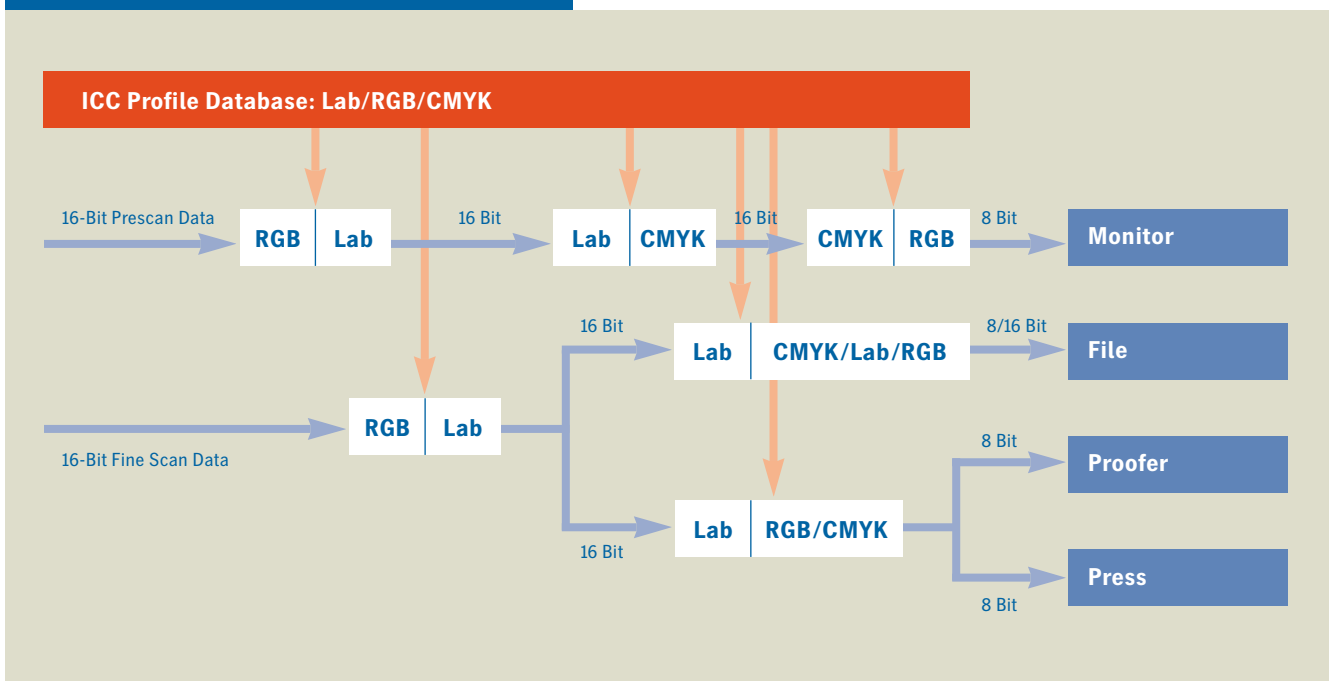
# High-end scanning • Professional, quick and easy LCH and CMYK corrections. Whatever kind of jobs you're working with, a Primescan will ensure perfect results every time.

## Software assistants – at the press of a button

Our software assistants can help you achieve first-class scanning results for both fully-automatic and semi-automatic workflows. In fully-automatic workflows, they can be used to automatically identify originals, automatically generate image frames (cropping), perform automatic color cast alignment, undertake automatic image highlight and shadow settings and perform gradation adaptations. They will also help in manual postprocessing operations. The assistants adopt standard settings where necessary, giving you more time to concentrate on more important things. Of course, all corrections can be saved for subsequent reuse and incorporated into ICC profiles.

The scanning and repro software of the Primescan series offers you excellent correction facilities, whatever the task. You can also set brightness, chroma and hue quickly and easily using intuitive LCH manipulation. And you can manipulate the image structure for professional and effective results using print-specific CMYK corrections, e.g. UCR/GCR settings, selective correction, dot gain and separation-dependent gradation. All settings are performed under WYSIWYG control and can be canceled if need be using the UNDO function.

### 16-Bit Workflow (Block Diagram)





**Multifunctionality is a must** • Color scanning and redigitization for the digital workflow are essential for today's prepress. Specialized Copydot scanners are expensive and no-one can say, how long they will be required. You should therefore invest in a scanner that can handle both.

### Perfect redigitization

The Primescan series combines a high-end color scanner and high-end redigitization scanner in a single unit. The Copix option supports classical descreening, facsimile copy (Copydot) and a mixture of both modes. Copix Assistant and Register Assistant make operation amazingly simple. Copix Assistant analyzes the screen definition, screen angle and basic film density completely automatically for each separation, thereby ensuring perfect scanning results. Register Assistant ensures absolute register accuracy – 100% automatically. Up to 64 separations can be redigitized and merged with absolute register precision. Even large formats such as 4-up sheets are no problem for Primescan.

### Perfect color workflow

Image processing in Lab, RGB or CMYK using Primescan and Newcolor is always performed using a 16-bit data depth. This ensures the absolute transparency of all image data. Wherever you are in the scanning process, you will always have access to top quality image data. The Primescan series uses ICC profiles to deliver perfect colors for every monitor or output system. Thanks to Heidelberg's Color Management technology, you can simulate the output result on the monitor. Whether you are working in RGB or CMYK, the monitor and output process profiles give you the means to evaluate the results with complete accuracy, even before the output commences. It would be hard to imagine a faster, more reliable solution.



Primestation gets your originals onto the drum quickly and easily – whether 35 mm transparencies, large reflectives or 4-up sheets.

### Reliability guaranteed – thanks to production quality

Reliability is vital in rationalized companies. Heidelberg therefore uses the most stringent checks for producing the Primescan series, and has also designed it to deliver the very best in quality. You can therefore rest assured that the Primescan can be relied upon completely when the going gets tough. Whichever Primescan you opt for, you can always be sure that you have made the right choice for both your present and future needs.

### Primescan D 7100

The Primescan D 7100 is your gateway to the high-end Primescan class. It is perfectly equipped for all color and Copix applications, right up to A3+ format.

### Primescan D 8200

The large-format Primescan D 8200 is ideal for all color and Copix applications up to A2+ format. The large format gives you the added capacity that is often so important. The D 8200 will grow with you. It can be upgraded easily to the fully-automatic Primescan D 8400 drum changer, thereby ensuring that your existing investment in the D 8200 remains safe, and giving your productivity the boost it needs to keep you ahead of your competitors.

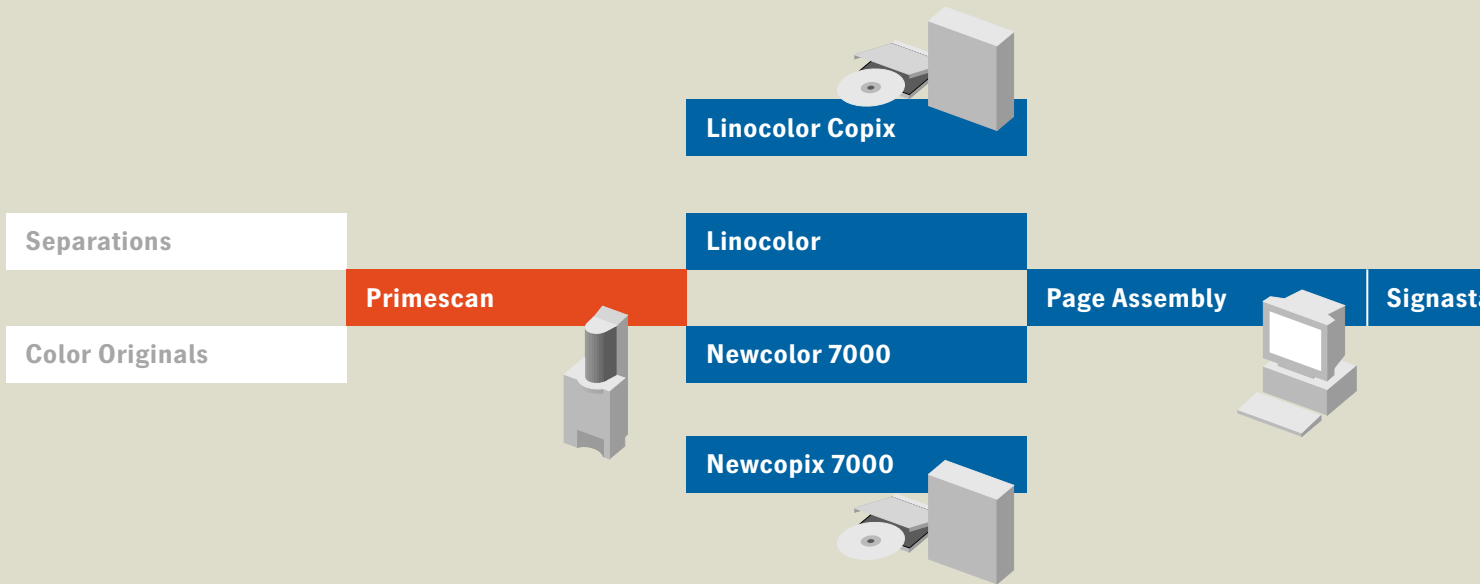
### Primescan D 8400

The leading light among high-end drum scanners. This fully-automatic drum changer can handle up to 4 drums, thereby ensuring outstanding productivity for color applications and redigitizing of analog originals. The software functions specially integrated for the D 8400 guarantee reliable scanning with unique job assignment ensured – thanks to the unique and unmistakable numbering of the D 8400 drums. Quality and productivity coupled with absolute reliability give you the certainty you need to sleep peacefully while the Primescan D 8400 is busy doing its job.

## Technical Specifications for Primescan D 7100, D 8200 and D 8400

<b>Scanning principle</b>	
Drum	Spot scanning with photomultiplier tubes
Image recorder	Parallel recording of a single image spot in RGB using 3 x photomultipliers
Aperture	Fully-automatic aperture setting
<b>Signal resolution</b>	12 bits per pixel and color (logarithmic); 16 bits per pixel and color following delogarithmization in the scanner
<b>Image processing hardware</b>	
Autoscaling	Special hardware for stepless scaling in the scanner
Autosharpening	Special hardware for optimum, high-speed USM calculations in the scanner
<b>Scanning resolution</b>	
Color/contone/lineart	max. 4330 l/cm (11,000 dpi)
<b>Scale range</b>	
Color/contone/lineart	20 - 3000%
<b>Scaling</b>	Stepless using Autoscaling hardware in increments of 0.1% range
<b>Dynamic range</b>	3.9 D, measured on the film output of a gray scale
<b>Resolvable density</b>	4.2 D, measured on the film output of a gray scale
<b>Originals</b>	Transparency and reflective, color and black/white, contone and lineart, positive and negative
<b>Thickness of originals</b>	max. 2 mm
<b>Drum speed</b>	max. 1800 rpm
<b>Interface</b>	SCSI-2 for workstation connection
<b>Voltage</b>	85 - 240 V AC, 47 - 63 Hz
<b>Power consumption</b>	approx. 500 W
<b>Ambient Conditions</b>	18 - 28° C, 30 - 80% relative humidity
<b>Dimensions (W x H x D)</b>	approx. 620 x 1507 x 660 mm, height when changing drums 2160 mm
<b>Weight</b>	approx. 250 kg
<b>Approvals/Conformity</b>	GS, UL, cUL, GOST/CE, FCC, ACN, CNS

# Perfect scanning and redigitization in the digital workflow



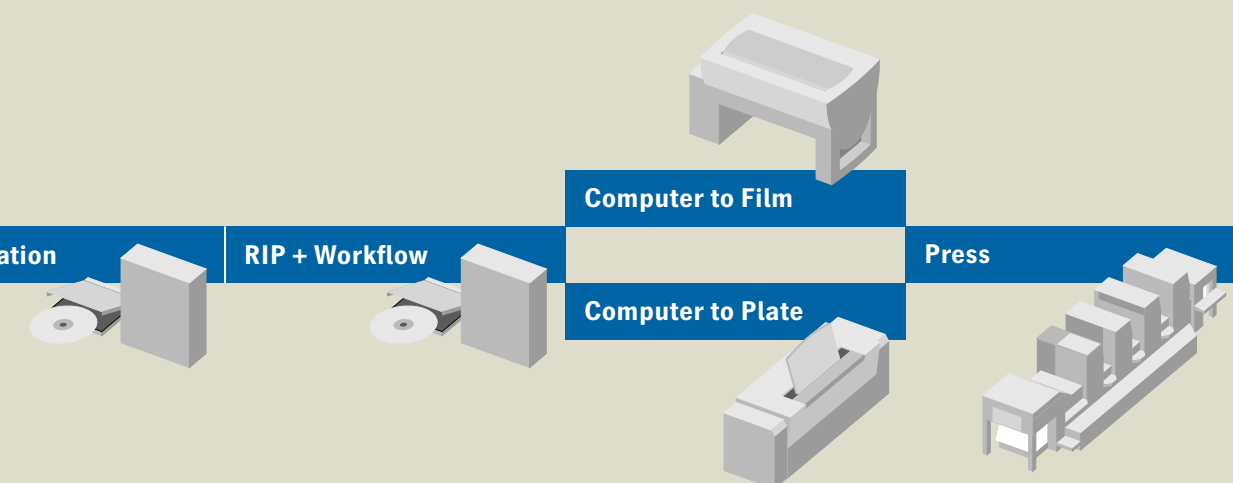
## Primescan D 7100

<b>Scanner</b>	Professional and multifunctional high-end drum scanner for all scanning jobs up to A3+
<b>Original formats with</b>	
Primescan 150 drum	max. 450 x 480 mm (17.7 x 18.9") for reflective/transparency originals
Primescan Copix 150 drum	max. 440 x 480 mm (17.3 x 18.9") for reflective/transparency originals
<b>Software</b>	
Newcolor 7000 or	Scanning and repro software for Intel-based PC workstation with NT 4.0 operating system
Linocolor	Scanning and repro software for Apple Power Macintosh workstation
<b>Optional accessory</b>	
Primestation D 7100	Offline mounting station for all Primescan 150 drums
<b>Options</b>	
Copix	Option for redigitizing color film separations

## Primescan D 8200

<b>Scanner</b>	Professional and multifunctional high-end drum scanner for all scanning jobs up to A2+
<b>Original formats with</b>	
Primescan 150 drum	max. 450 x 480 mm (17.7 x 18.9") for reflective/transparency originals
Primescan Copix 150 drum	max. 440 x 480 mm (17.3 x 18.9") for reflective/transparency originals
Primescan 212 drum	max. 645 x 500 mm (25.4 x 19.7") for reflective/transparency originals
Primescan Copix 212 drum	max. 635 x 500 mm (25 x 19.7") for reflective/transparency originals
<b>Software</b>	
Newcolor 7000 or	Scanning and repro software for Intel-based PC workstation with NT 4.0 operating system
Linocolor	Scanning and repro software for Apple Power Macintosh workstation
<b>Optional accessory</b>	
Primestation D 8200	Offline mounting station for all Primescan 150 and Primescan 212 drums
<b>Options</b>	
Copix	Option for redigitizing color film separations
Primescan D 8400 upgrade	Option for upgrading to the fully-automatic Primescan D 8400 drum changer

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## Primescan D 8400

<b>Scanner</b>	Professional and multifunctional high-end drum scanner for all scanning jobs up to A2+ with fully-automatic drum changer
<b>Drum changer</b>	Fully-automatic drum changer with fully-automatic drum recognition and a magazine capacity of max. 4 drums.
<b>Original formats with</b>	
Primescan 150 drum	max. 450 x 480 mm (17.7 x 18.9") for reflective/transparency originals
Primescan Copix 150 drum	max. 440 x 480 mm (17.3 x 18.9") for reflective/transparency originals
Primescan 212 drum	max. 645 x 500 mm (25.4 x 19.7") for reflective/transparency originals
Primescan Copix 212 drum	max. 635 x 500 mm (25 x 19.7") for reflective/transparency originals
<b>Software</b>	
Newcolor 7000	Scanning and repro software for Intel-based PC workstation with NT 4.0 operating system
<b>Optional accessory</b>	
Primestation D 8200	Offline mounting station for all Primescan 150 and Primescan 212 drums
<b>Options</b>	
Copix	Option for redigitizing color film separations

## Primescan Copix options

<b>Copix option</b>	Option for redigitizing color film separations incl. software and hardware
<b>Scanners supported</b>	Primescan D 7100, Primescan D 8200, Primescan D 8400
<b>Software</b>	Newcopix 7000 (Intel-based PC workstation with NT 4.0 operating system) or Linocolor Copix (Apple Power Macintosh workstation) incl. following function
Descreen	Descreening screened film separations
Copydot	Redigitizing screened film separations
Mixedmode	Combination of Descreen and Copydot
Merge	Automatic merging of up to 64 film separations
Copix Assistant	Automatic recognition of screen definition, screen angle and basic film density of the original
Register Assistant	Automatic alignment (registration) of film separations
<b>Resolutions</b>	
Scanning resolution	Variable scanning resolution up to max. 1000 l/cm (2540 dpi)
Output resolution	Variable output resolution up to max. 1333 l/cm (3386 dpi)



# Heidelberg – Solutions for the Entire Printing and Publishing Business • Our commitment is to being the best partner to the graphic arts industry, offering forward-looking solutions. Worldwide – Heidelberg is where your needs are met.



Our focus: the customer. Heidelberg provides custom-designed printing solutions for large and small companies.

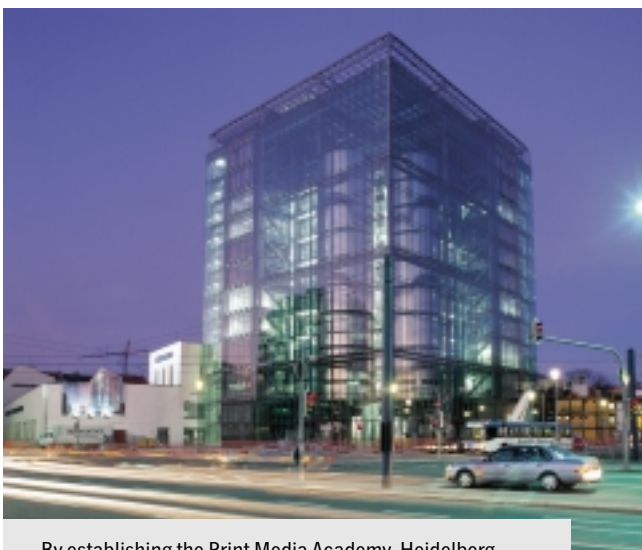


Borders are dissolving. And that is why the Heidelberg Group has evolved into a global player for modern print solutions. But also within the world of printing, borders are rapidly vanishing. The previously separate realms of prepress, press and postpress are increasingly merging

within the scope of integrated solutions. Heidelberg has played a central role in driving this dynamic process. And our goal is still to play a leading part in shaping the future of the graphic arts industry.

Customer focus is our policy. No matter whether we are dealing with family-run operations or large corporations – our modular components offer them tailored solutions ranging from individual products to entire workflows. Heidelberg covers every stage of the print process chain with products and services that define the future of the graphic arts. Our customers can count on having a competent, reliable partner ready to support them in all areas – 365 days a year, from 250 sales and service centers worldwide.

By establishing the Print Media Academy, we have created an international center for innovation, communication and training that not only covers classical training of printers and mechanics, but also blazes new trails by offering an advanced course for print managers.



By establishing the Print Media Academy, Heidelberg is providing the global graphic arts community with a unique center for sharing knowledge.



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### Imprint

Printing date: 05/00

Printing plate production: CtF with Heidelberg Drysetter

Printing: Heidelberg Speedmaster

Fonts: Heidelberg Gothic, Heidelberg Antiqua

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