

AUTOMATIC BOOK SCANNER

# SCANROBOT®

*turn the Page*



**AUTOMATIC BOOK SCANNER  
TO SPEED UP YOUR PRODUCTIVITY**

# SYSTEM OVERVIEW

## ScanRobot® 2.0 MDS

### High quality - Automatic Book Scanner

- Fast - Up to 2,500 pages per hour
- Distortion free & Gentle scanning (prism technology)
- Unique 60° V-shape book cradle
- Single scan technology (for covers, folded maps, loose pages, ...)
- Self standing unit on wheels for easy relocating
- Highly ergonomic design



### Unique hardware features



#### Patented capturing technology

- \* Unique 60° prism
- \* One central capturing unit
- \* Equal and constant focus
- \* No mechanical shutter

#### Only one mechanical moving part

- \* Robust and simple design
- \* Built for 24h shift operation
- \* Low maintenance
- \* Very long life cycle

#### Wooden 60° V-shape book cradle

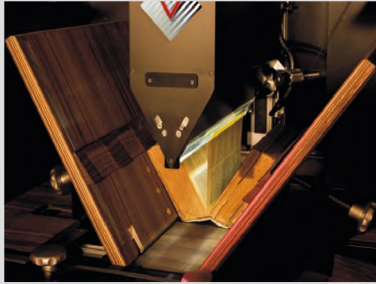
- \* Self centering
- \* Adjustable between 60° and 100°
- \* Minimum load/unload time
- \* Suitable for hard and soft covers

# ADVANTAGES

## ScanRobot® 2.0 MDS

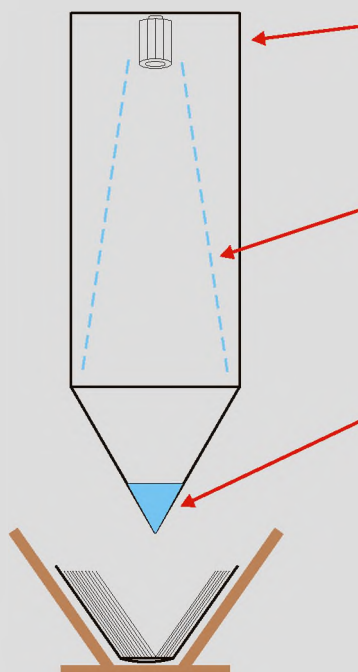


### Page turning technology



- Most gentle & touch free page turning by air flow
- Automatic (up to 2,500 pph) with process monitoring & double sheet control
- Semi-automatic / weightless mode
- No clamps
- No fingers
- No glass plates

### Patented capturing system



#### Closed capturing unit (optical 300/400 dpi)

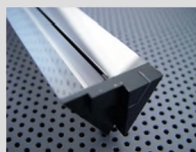
- \* Independent from ambient light
- \* Minimum calibration (static white balance)
- \* Constant distance between object and focal plane

#### Inside LED illumination

- \* Perfect homogenous page illumination
- \* High color reproduction index value (CRI)
- \* No radiation of heat, infrared or UV light
- \* Long life cycle LED technology

#### High quality 60° prism technology

- \* Distortion free scanning
- \* Smallest book opening angle - unique 60° V-shape



The ScanRobot® can scan every page with the exact, equal and maximum resolution independent of the book size, thickness and the paper quality.

# UNIVERSAL, GENTLE & ROBUST

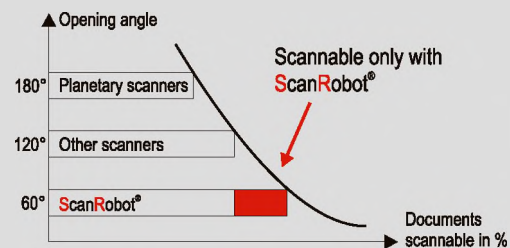
## ScanRobot® 2.0 MDS

### Universal - suitable for any bound material



### Gentle - suitable for books up from the 14<sup>th</sup> century

- Book opening angle 60°
- No overstretching of the book binding
- Pressure free scanning
- Touch free page turning by air flow
- LED illumination without any radiation of heat, infrared or UV



### Robust - low maintenance

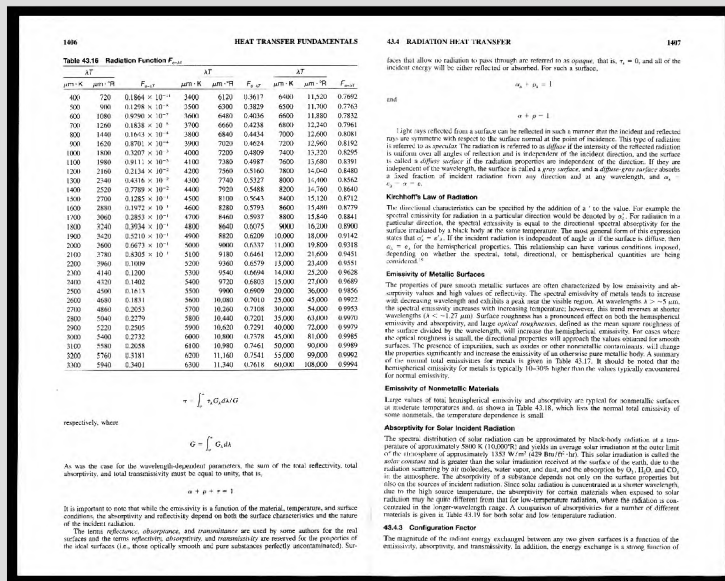
- Designed for 24h-shift operation
- Only one active moving part
- High quality industrial components
- Very long system life cycle
- Worldwide customer proven



# IMAGE QUALITY - 1/3

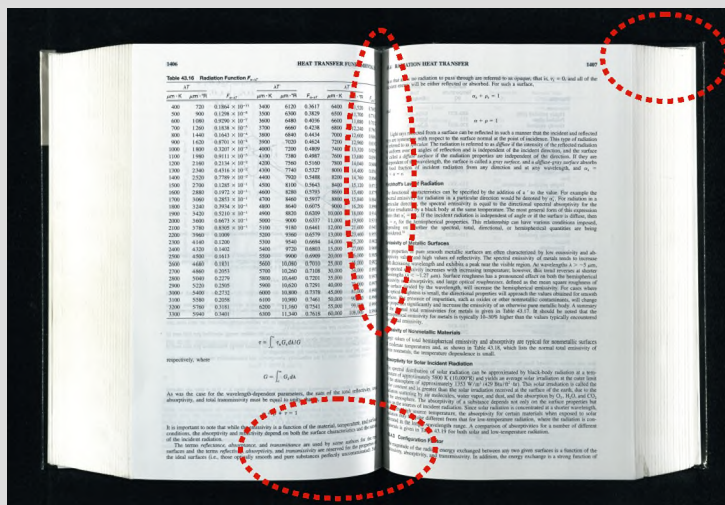
## ScanRobot® 2.0 MDS

ScanRobot®



- No distortions
- No curvature
- No waves
- Exact page margin scan
- Perfect illumination

## Planetary scanner



- Distortions
- Curves
- No exact page margin
- Inhomogeneous illumination

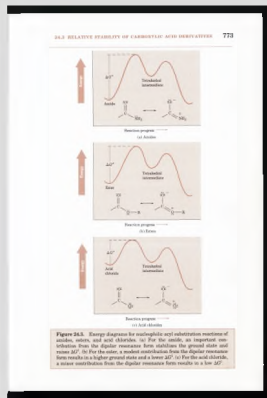
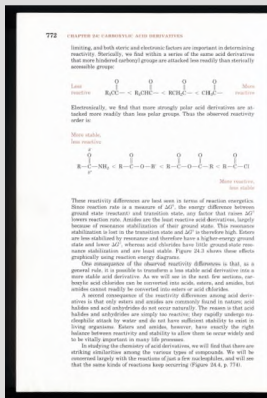
## Upcoming challenges

- Page cropping
- Changing page sizes
- More post processing
- Uncertain OCR results

# IMAGE QUALITY - 2/3

## ScanRobot® 2.0 MDS

ScanRobot®



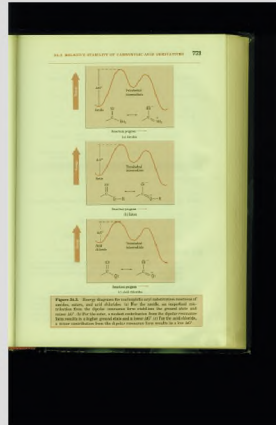
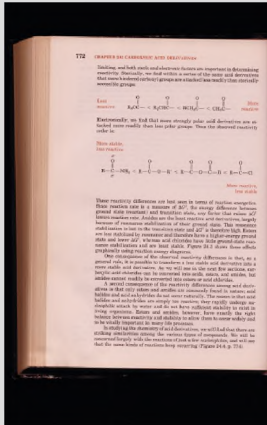
- No size & resolution variation
- No colour variation
- No focus & sharpness variation
- No white point variation

### Result

- No corrections needed

1 capturing unit = 1 scan result

### Camera devices\*



- Varying sizes & resolutions
- Varying colours
- Varying colours
- Varying white point

### Upcoming challenges

- Resolution correction
- Colour correction
- Focus & sharpness correction

2 cameras = 2 scan results

\* Effects are amplified for demonstration reasons

# IMAGE QUALITY - 3/3

## ScanRobot® 2.0 MDS

### ScanRobot®



- Single page image
- Easy page edge detection
- Easy cropping

- Artefact free
- No clamps / fingers
- No removing needed

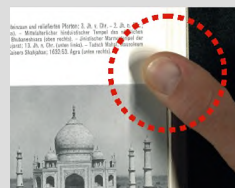
### Other scanner

#### Disturbing book block



- Page edge detecting challenge
- Cropping & deskewing challenge

#### Image artefacts



- Artefacts like clamps or fingers
- Removing challenge

# SCANROBOT® 2.0 MDS

## MASS DIGITIZATION SYSTEM

### Customer feedback

*“The ScanRobot® can scan almost any types of book, binding or paper (e.g. Leather-covered wooden bindings, flexible parchment bindings, cardboard bindings, thick, thin or rigid paper).”*

**The Bavarian State Library**

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*“Treventus Mechatronics GmbH submitted a tender that offers some very clear advantages. [...] The evaluation group’s assessment is that no other supplier can match the tender from Treventus Mechatronics GmbH.”*

**Swedish tender evaluation committee (8 specialists)**

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*“The unique image-taking and page-turning technique of the ScanRobot® shows its benefits in particular with thick books. [...] the pages can be scanned [...] absolutely distortion-free and without any shadows [...] up to just a few mm into the fold.”*

**Digitization Center Regensburg**

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**WORLDWIDE ESTABLISHED  
IN OVER 60 COUNTRIES**



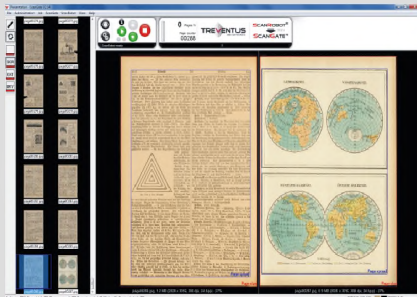


# CAPTURING SOFTWARE OPTIONS

for ScanRobot® 2.0 MDS

## SCANGATE™ RT (Real-Time processing edition)

Included with ScanRobot® 2.0 MDS as a stand-alone software package.

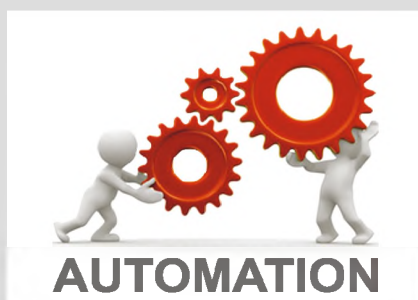


- Capturing & treatment in one automated step
- Live view of scanned & treated images
- Ready to use output (= time saving & intuitive)
- Parameter profiles administration (storage of parameters for fastest book changeovers)
- Additional flatbed scanner interface (to scan loose pages, folded maps, covers, etc.)
- Multi language user interface

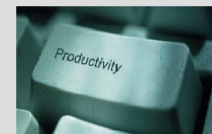
Please find more information about ScanGate™ RT in the separate ScanRobot® solution comparison chart.

## SCANGATE™ SF (ScanFlow™ edition)

Only available for ScanRobot® 2.0 MDS with a ScanFlow™ workflow solution package.



- Includes all functionalities of ScanGate™ RT
- Fully integrated within ScanFlow™
- Separates the scanning from image treatment
- Enables the highest scanning productivity
- Offers multiple quality check options



Please find more information about ScanGate™ SF in the separate ScanRobot® solution comparison chart.

# SPECIFICATIONS & SCOPE OF DELIVERY

## ScanRobot® 2.0 MDS

### Specifications

• <b>Speed</b>	up to 2,500 pages/hour* (automatic mode)
• <b>Page turning</b>	automatic with process monitoring (incl. double sheet control), semi-automatic / weightless mode and single scan technology
• <b>Aperture angle</b>	60 degrees (steplessly adjustable between 60 and 100 degrees)
• <b>Illumination</b>	user- and book-friendly LED illumination (without any exposure to heat, IR or UV)
• <b>Resolution</b>	constant and independent of the page format optical 300 dpi (included) optical 400 dpi (optional)
• <b>Colour depth</b>	36-bit
• <b>Image types</b>	colour, greyscale, b&w
• <b>Page format</b> (scanning area)	minimum (2 times - automatic mode): 5 x 5 cm (1.97 x 1.97 in) maximum (2 times - automatic mode): 32 x 32 cm (12.6 x 12.6 in) single scan area: 30 x 43.2 cm (11.8 x 17 in)
• <b>Book size</b> (maximum)	35.5 x 34.0 cm (13.98 x 13.39 in)
• <b>Book thickness</b>	up to 15 cm (5.91 in)
• <b>Paper thickness</b>	no restrictions (recommended spectrum: 40 g/m <sup>2</sup> to 260 g/m <sup>2</sup> )
• <b>Paper quality</b>	all pages, also acid damaged and wavy pages
• <b>Covers</b>	all covers (soft and rigid)
• <b>Book age</b>	14th century up to now
• <b>Storage formats</b>	jpg, jpg2000, tiff, tiff G4, png, gif, bmp, pdf
• <b>Dimensions</b>	l/w/h (without monitor): 0,78 x 0,78 x 1,90 m (30.7 x 30.7 x 74.8 in)
• <b>Weight</b>	260 kg (573 lbs)

\* The page speed can vary depending on paper quality, book size and the book condition in general.

### Scope of delivery

- 1 pc Automatic book scanner ScanRobot® 2.0 (300 dpi standard, 400dpi optional)
- 1 pc Single-scan book scanner (flatbed A3)
- 1 pc Control Computer System (high-end PC-workstation)
- 1 pc EIZO 23" widescreen monitor (colour calibrated)
- 1 pc Integrated holder for monitor, keyboard and mouse
- 1 pc Capturing software with real-time processing - ScanGate™ RT (available in many languages)

**OPTIONAL:** various IPP (image post processing), WORKFLOW and OCR solutions

# SCANROBOT® 2.0 MDS

## MASS DIGITIZATION SYSTEM

### World Wide References




- National University, AUSTRALIA  
University of Queensland, AUSTRALIA  
Federal Office of Metrology and Surveying, AUSTRIA  
National Library, AUSTRIA  
University of Graz Library, AUSTRIA  
University Library of Liege, BELGIUM  
Brazilian Institute of Agronomic Research, BRAZIL  
University of Prince Edward Island, CANADA  
National Archive, COLOMBIA  
Academy of Science, CZECH REPUBLIC  
National Library, CZECH REPUBLIC  
University of Jyväskylä, FINLAND  
Bavarian State Library, GERMANY  
State Library of Berlin, GERMANY  
University Library Regensburg, GERMANY  
NUEPA National University, INDIA  
Trinity College Library, IRELAND  
Meteo Operation Center, JAPAN  
Nazarbaev University, KAZAKHSTAN  
Ministry of Awqaf and Islamic Affairs, KUWAIT  
National Library, KUWAIT  
National Library, LATVIA  
University, LUXEMBOURG  
Universidad Autonoma Metropolitana, MEXICO  
National Library, MONGOLIA
- GMS Service Provider, NETHERLANDS  
National Library, NORWAY  
Academy of Science Library, POLAND  
National Library, POLAND  
Siberian Federal University, RUSSIA  
Moscow State University, RUSSIA  
National Library, RUSSIA  
King Fahd Private Library, SAUDIA ARABIA  
Pavol Jozef Šafárik University, SLOVAKIA  
National Library, SLOVAKIA  
University Library of Bratislava, SLOVAKIA  
Universidad Complutense de Madrid, SPAIN  
National Library, SWEDEN  
Stockholm University Library, SWEDEN  
Umeå University Library, SWEDEN  
ETH Library of Zürich, SWITZERLAND  
Zentralbibliothek Zürich, SWITZERLAND  
Ankara Social University, TURKEY  
National Library, TURKEY  
Ukrainian Institute of Industrial Property, UKRAINE  
The Getty Research Institute, UNITED STATES  
Scanarkist Service Provider, UNITED STATES  
Utah State University, UNITED STATES  
Vietnam Institute of Social Sciences Information, VIETNAM  
Vietnam National University, VIETNAM

... and many more ...

*Alphabetical order by countries.*

# PRODUCT FAMILY

**SCANROBOT<sup>®</sup>**  
*turn the Page*



**AUTOMATIC BOOK SCANNER**  
TO SPEED UP YOUR PRODUCTIVITY

TREVENTUS

**SCANLIGHT<sup>™</sup>**  
*keep it Simple*

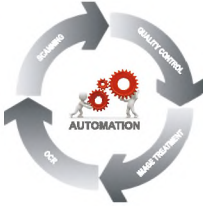


**IMAGE TREATMENT**

**THE MOST POWERFUL SOFTWARE**  
FOR YOUR IMAGE TREATMENT

TREVENTUS

**SCANFLOW<sup>™</sup>**  
*stay on Track*



**CUSTOMIZED WORKFLOW**

**THE MOST EFFICIENT SOLUTION**  
FOR YOUR MASS DIGITIZATION

TREVENTUS

**NAINUWA<sup>™</sup>**  
*open your Mind*



**DIGITAL LIBRARY**

**THE WORLD'S MOST INNOVATIVE**  
DIGITAL LIBRARY SYSTEM

TREVENTUS

**OCRSOLUTIONS<sup>™</sup>**  
*highlight your Content*



**TEXT RECOGNITION**

**FULLY AUTOMATED TEXT RECOGNITION**  
FOR YOUR SCANFLOW<sup>™</sup> & NAINUWA<sup>™</sup>

TREVENTUS

**CONSULTING<sup>™</sup>**  
*support at any Stage*



**PROJECT DEVELOPMENT**

**YOUR SOLUTION PARTNER FOR**  
MASS DIGITIZATION PROJECTS

TREVENTUS

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## Awards

Winner of the European ICT Grand Prize  
Innovation prize of the Theodor Kery foundation  
1<sup>st</sup> place in Genius Innovation Award

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