
COMPETITIVE ADVANTAGES



QIDENUS TECHNOLOGIES *Robotic Book Scanning Technology*

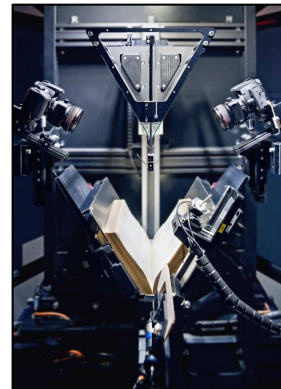
Revolutionary page-turning intelligence

The RBS Pro is the only true fully-automatic bookscanner on the market featuring page-turning intelligence. This revolutionary technology is capable of automatically re-adjusting the page-turning process within a book based on the electronic feedback of the double-page control, ensuring that the Qidenus is truly capable of turning book pages from front to back without operator interaction.

Intuitive page-turning mechanism

The RBS Pro uses a solely mechanical page-turning mechanism, offering several advantages:

- no congestion of the page-turning mechanism due to dirt (a known problem in competitive scanners)
- simple and easy integration of technology within varying products and environments
- an independence from blowing/vacuum mechanisms for easier maintenance
- the ability of the “rubber finger” to perfectly adjust to customer/book needs



Variable optic system

The RBS Pro uses a variable optic system consisting of different Canon DSLR's. Unlike competitors, Qidenus also offers integration with other camera systems, making the system more versatile to customer needs (i.e.: industrial cameras and the very high-definition Hasselblad camera).

Intelligent glass plate

The RBS Pro uses an automatic glass plate that is shaped in the same degree as the book cradle. This ensures flat images with no curvature while applying NO pressure to the book spine. Robots without a glass plate do not produce completely flat images.

High-efficiency throughput and workflow system

Qidenus has developed an ingenious software workflow system that allows industrial scale digitization of books through sequencing of the different work steps, considerably minimizing the stop times between book-loading. Operating on an SQL database system, the Qidenus can allocate batch processing, loading parameters and external post-processing at different locations. This feature ensures that all processing need not be performed directly on the robot, but can instead be outsourced to an IT system, allowing for continuous scanning of unlimited books without having to stop for post-processing.

Switch operation modes with a single touch

Recognizing that not every book can be scanned automatically from beginning to end, the RBS Pro allows for an operator to switch between manual and automatic modes with a single touch. This offers the flexibility to scan foldouts, book covers and difficult pages all within the same machine, quickening the production process and eliminating potential post-production errors.



Reduced labor costs

The RBS Pro page-turning intelligence and work system combine to create an operator/machine ratio of 1:3 (conservatively) to 1:5. Based on extensive field testing, a single operator is capable of operating up to five machines simultaneously; competitive units require 1:1 operator interaction for page-turning and digitization processes.

Unprecedented customization

The Qidenus industrial approach of building high-efficiency, individual robotic systems allows for an unprecedented ability to configure a scanner to exact customer specifications. Offerings include:

- variable book aperture angles
- differing book-size compatibility (<A5 through A3 and books with “clamping” characteristics)
- a variety of optic systems
- security features
- implementation into existing or new IT workflow



Low maintenance

The RBS Pro was built by a team of renowned engineers known for designing high-efficiency production lines for Siemens and BMW. All Qidenus components and security features are of the highest quality and are made for high industrial throughput and low maintenance. The complete robot is made of custom-designed, cnc-drilled aluminum parts for maximum durability. All spare parts are available internationally on 24-hour notice. **NOTE:** In over 12 months of prototype scanning production, Qidenus did not experience a single incident of equipment/parts failure.