MEET THE MACH12

And Meet (or Exceed) True Optical DPI Requirements with Ease and Precision

Two decades ago, Mekel Technology introduced the first microfilm and microfiche scanners to the world. The innovations continue and today The Crowley Company, owners and manufacturers of Mekel Technology, introduces the newest generation Mekel microfilm scanner for **production volume archival scanning**, the *MACH12*.

MACH12 *Key Features*

- ▶ High optical resolution – *100-600 dpi and beyond true optical resolution*
- ▶ 12-bit camera – *with output range of 8-bit to 12-bit file output*
- ▶ Highly-refined precision lenses
- ▶ Calibrated/focused LED lighting
- ▶ Stable and gentle transport system
- ▶ Fast throughput
- ▶ Unrivaled image quality and capture accuracy– *excellent tonality and depth of field*
- ▶ Sturdy case with built-in reel storage
- ▶ Robust work ethic – *works 24/7 with nominal maintenance requirements*
- ▶ External PC – *for maximum uptime*
- ▶ 16mm and 35mm microfilm conversion capability
- ▶ 1000' roll and 3M/ANSI cartridge standard
- ▶ Conversion to most electronic imaging formats, including archival formats
- ▶ Powered by Mekel's one-of-a-kind *QuantumScan* and *QuantumProcess* suite

Why The MACH12?

For archivists and records managers, there is no greater measure of success than accuracy to the original media. In today's business climate, that accuracy has to be paired with maximum efficiency. The *MACH12* combines the best of both worlds, using NARA and Library of Congress preservation specifications (such as those of the true optical 400 dpi National Digital Newspaper Program) as the gold standard, and joining them with innovative technology for an unmatched return on investment.
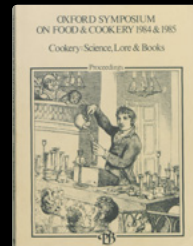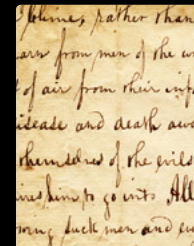
Load and go

- ▶ Intuitive operation requires minimal training

Expect the best

- ▶ With an output range of 8-bit to 12-bit output, the *MACH12* meets and exceeds true optical dpi requirements for 16 and 35mm film capture of books, newspapers, manuscripts, financial records and more
- ▶ Small fonts and highly reduced images are crystal clear
- ▶ OCR results achieve ever-higher accuracy with the *MACH12*

MADE IN AMERICA

MEKEL TECHNOLOGY'S
QuantuM

| Load the roll | → | Select a local or network directory | → | Start production scanning | → |

Increased operator production
- ▶ Scan at full-rated speeds without operator intervention
- ▶ Share quality assurance tasks with multiple operators
- ▶ Drive multiple **MACH-series** microfilm scanners with a single operator

Reduced microform scanning costs
- ▶ Never search for lost images
- ▶ Eliminate the need to re-scan

Guaranteed 100% image capture

Optimum image quality

QuantuM Scan
- Automatic Frame Detection
- Speed
- Optimum Resolution
- Template Options
- Image Quality Settings
- Advanced Focus Option
- Pre-Scan Testing
- Multiple Ribbon Output Options
- Advanced Frame Detection
- Easy Transfer
- Easy Workflow Integration

QuantuM Process
- Batch Processing
- Strip Zoom Capability
- Editing Toolkit
- Fixed-Grid Frame Replication
- Blip Removal
- Irregular Frame Flag
- Custom Processing
- Multiple Output Options
- Easy Workflow Integration
- Image Enhancement
- File-Naming Features
- Auto-Split and Book Mode
- "Go To" Command
- Re-Detect Frames
- Blackout Framing
- Document Separation Tagging

TECHNICAL SPECIFICATIONS

CAMERA/OPTICS	Up to 12-bit dynamic range with gamma correction grayscale output. Full depth of pixels processed.
	Superior real-time or post-scan image processing speeds
	Direct path imaging: camera, film and light source are in-line to ensure optimum image quality
	Full 12,288 pixel CCD array for highest true optical dpi in the industry
	Automatic Gain Control (AGC) to optimize image quality while scanning
	Mekel "smoothlight" fiber optic bundle balances lighting across entire scan area; no hot spots or shadowing
RESOLUTION	100-600 dpi and beyond true optical resolution
FILM TYPES	100', 215' and 1,000' roll standard
	Accepts ANSI, M-types and open spools
	16mm/35mm; simplex/duplex; positive/negative
	Silver, Diazo and Vesicular formats
HARDWARE IMAGE ENHANCEMENT	Real-time image sharpen and enhancement done in hardware; no reduction in throughput
FILM CONTROL	Electronically-controlled film format selection for precise positioning of the CCD camera and lens; high-speed rewind
IMAGE PROCESSING	Task set-up by job or saved in set-up file
	Up to 1600 images per minute
	Single, double or triple level blip code detection
	Leading and trail edge detection
	Simultaneous output of grayscale and bi-tonal formats
	Output to single/multi-page, bi-tonal TIFF (G3, G4) and JPEG
	Output to TIFF uncompressed, PDF compressed (single/multi), JPEG2000, PDF/A and others
HARDWARE NOTABLES	Industry-leading reliability
	Film cleaning rollers: custom technology cleans film as it scans
	No pinch rollers to dislodge or separate brittle/old film splices
	Superior transport stability via vertically-aligned film transport system
OPERATING SYSTEM	Windows 7 and Windows 8 (32- and 64-bit), XP or Vista
POWER REQUIREMENTS	50Hz or 60Hz; 90-240v; 500w, single-phase switch for domestic or international use
AGENCY APPROVALS	FCC, UL and CE certification
DIMENSIONS/WEIGHT	15.5" l x 15.5" w x 22" h/50 lbs.