

TECHKON

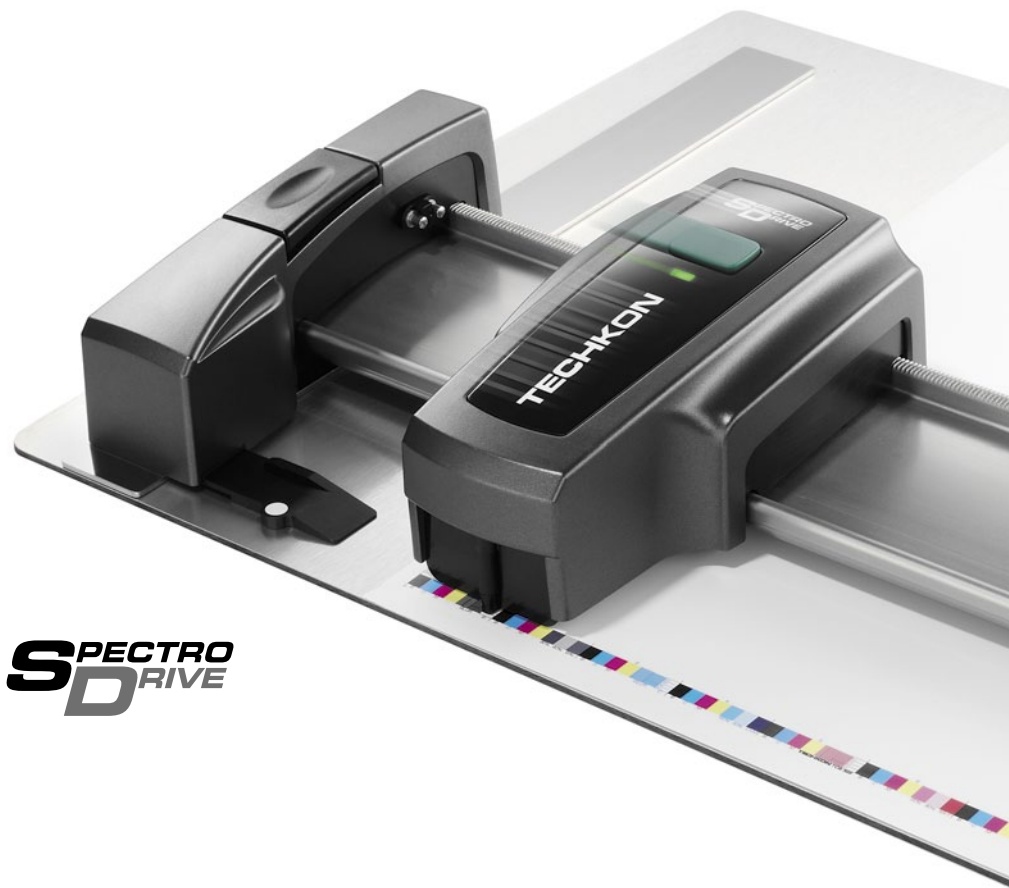
**Scan-Measurement-System
TECHKON SpectroDrive**

**All colors under
perfect control**



Precise . Effective . Reliable
Technology Made in Germany

TECHKON SpectroDrive Scan-Measurement-System



High quality and productivity

These are the two factors which are essential for today's success in the printing business.

TECHKON SpectroDrive, with its automatic color and density measurement capabilities is the perfect solution to substantially increase press productivity by ensuring consistent print-to-print color accuracy throughout the press run.

The system consists of two components: The motorized measurement system scans the complete color bar on a printed sheet within seconds and simultaneously sends the spectral measurement data wirelessly to the PC where all relevant information for controlling the printing press is displayed.

Increase profitability

Due to the trend of smaller print jobs and shorter press runs the time from starting a press to getting it "in color" and running with consistent quality is cost critical. SpectroDrive reduces this "non-productive" set-up time dramatically. You will increase profitability thanks to substantially reducing paper and ink waste and getting more precious time out of your printing press. The system makes your printing jobs predictable and calculable. In addition, the complaint rate will go down significantly and your customers will appreciate the sensible gain and reliability of the print quality.

The high rate of return of investment is amazing. The relative low – and only one time – investment will show in recurring profits almost immediately. Also, older printing presses get a productivity boost thanks to SpectroDrive.

Quality assurance during the complete press run

Increasing customer demands require that the press run is printed according to defined and documented industry print quality standards. TECHKON SpectroDrive and the related PC-software ExPresso are practical utilities that adhere to the print quality standards as defined by ISO 12647 and Gracol G7™.

Ease of use and high speed measurement

Setting up a printing press can be compared with starting a jet plane. It is a time-critical process, where the press operator – like a pilot – must observe and perform a multitude of important tasks at the same time. Hence, during the development of SpectroDrive great care was taken in delivering a system that is easy to use, does not distract from running the press and delivers all significant information instantly and automatically.

The measurement device only has one button to start the measurement process. The PC-software ExPresso has a self-explanatory user interface which can be operated via touch-screen. Installation is simple as well. After a few minutes the system is operable and ready to take measurements.

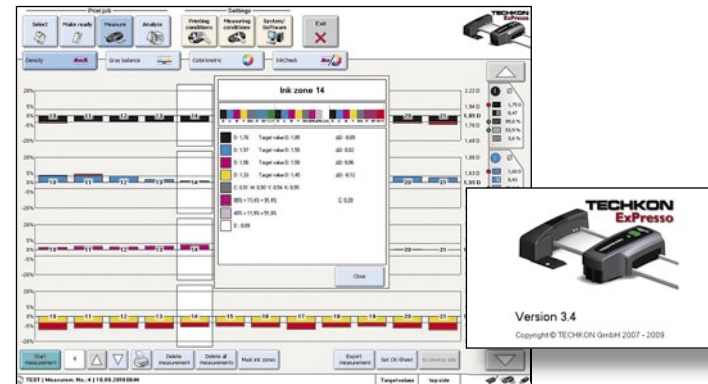
Two measurement systems in one

This relates not only to the technical fact that the spectral measurements allow displaying densitometric and colorimetric data, but that SpectroDrive can be used as a scanning device as well as a hand-held instrument for single measurements. Just take the device from the horizontal track and position it wherever you want to take a color measurement.

Software ExPresso

The TECHKON ExPresso software offers a comprehensive tool-set comprising measurement of spot colors, support of up to 16 print units, face and reverse printing, display of color density, dot gain, gray balance, CIE L*a*b*-values and recommendations on how to adjust the ink on the press. This is only an excerpt of the complete functionality.

Thanks to its modularity, TECHKON ExPresso is expandable and versatile. The measurement data can be exported into other software applications that connect real-time to printing presses to enable a 'close loop' turn-key solution. In addition, TECHKON ExPresso can export measured data to standard applications such as Microsoft Excel™.



Versions and functions

The scan-measurement device SpectroDrive and the Windows software ExPresso form a complete quality control system for increasing productivity and quality of a printing press.

There are two different packages available:

SpectroDrive + Software ExPresso Basic

Consists of the spectral-measurement device SpectroDrive and the Windows software TECHKON ExPresso Basic with the following functions:

- Ink zone specific density display
- Color density for CMYK and spot colors (spectral density)
- Densitometric gray balance
- Dot area, dot gain
- Printing contrast
- Slur/doubling value
- Target values and tolerances
- OK-sheet
- Measurement data export
- Face- and reverse printing
- Works with any sheet format and color bar length; display of single measurements when used as a hand-held device
- Statistical analysis and report
- Supports up to 6 printing units

SpectroDrive + Software ExPresso Pro

Same functions as the Basic package and additionally:

- Ink zone specific colorimetric $\Delta E^*a^*b^*$ display, CIE $L^*a^*b^*$, $\Delta L^*a^*b^*$, CIE $L^*C^*h^*$, $\Delta L^*C^*h^*$
- "InkCheck" recommendation for ink key setting
- Display and evaluation according to ISO 12647 (PSO), Gracol G7™ generator
- Supports up to 16 printing units

A post-purchase software-upgrade from the Basic- to the Pro-version can be done easily.

Software

TECHKON ExPresso;

Delivered on CD with software protection key (USB-dongle) and CD with print control strip TCS Digital

System requirements: Windows XP, Vista or 7

Contents

- Measurement device SpectroDrive
- Charging console with integrated white standard
- AC adapter with universal plugs
- Horizontal track with holder; 2 vertical bars
- Module for wireless data transmission
- USB cable
- Carrying case
- Manual with ISO 9000 compliant certificate

Optional accessories

- Color reference SpectroCheck

Specifications

Measurement technology	Spectral remission measurement and color density determination to ISO 5-3/4
Measurement geometry	0/45° optics to DIN 5033
Spectral range	400 to 700 nm in 10 nm steps
Measurement aperture	1.5 mm, appropriate for measuring patches with at least 3 mm height and 3 mm width; UV-Cut filter optional
Light source	Gas-filled lamp, type A illumination
Polarization filter	Twice linear crossed, switched on and off per software command
Measurement time	Approx. 160 mm/s for 4 mm patches (equals approx. 3 seconds for 520 mm sheet length), single measurement approx. 1 second (if SpectroDrive is used as hand-held device)
White reference	Absolute and relative; absolute white standard integrated in charging console
Illumination types / Standard observer	A, C, D50, D65, F 2/7/11 / 2°, 10°
Density filter	DIN 16536, DIN 16536 NB, ISO/ANSI T, ISO/ANSI I, ISO E, spectral density Dmax
Density measurement range	0.00 D – 2.50 D
Formats	52 (20") for sheet format 00 (B3+, 370 x 520 mm); 74 (28") for sheet format 0B (B2+, 520 x 740 mm); 102 (40") for sheet format 3B (B1+, 720 x 1020 mm); 105 (42") for sheet format 3B+ (B1+, 780 x 1050 mm); special formats (up to 1800 mm) on request
Repeatability	0.01 D; 0.03 CIE $\Delta E^*a^*b^*$ Inter-instrument agreement 0.01 D; 0.3 CIE $\Delta E^*a^*b^*$
Data transmission	Module for wireless data transmission with PC-sided USB connection
Power supply	NiMH battery, reg. recharge via charging console with AC adapter, 100 – 240V, 47 – 63 Hz
Weight	Measurement device: 820 grams
Dimensions	70 x 95 x 170 mm (approx. 2.8 x 3.7 x 6.7 inch)
System requirements	for TECHKON software: Windows XP, Vista or 7

The TECHKON Spectro series

Good printing is a matter of quality! The key to success is to control all steps of the process which lead to the printing product. The Spectro series provides you with the perfect tool for each of these steps.

SpectroPlate is the ideal device for checking the quality of a printing plate. Today in the age of Computer-to-Plate it is obvious: Without quality control in pre-press, there is no guarantee for quality in print!

Concerning colorimetric and densitometric measurements on printed products, the precise and compact hand-held measurement device SpectroDens is a real all-rounder. It is full of functions but nevertheless easy to use. Direct positioning of the measurement head on the measurement field ensures a secure and quick measurement.

When it comes to automatic measurement and analysis of complete print control strips, the TECHKON scan-measurement devices are used. SpectroJet is quickly guided by hand along the color bar. Optionally a guidance track supports this task, when long print control strips have to be measured. SpectroDrive is motorized and therefore scans a print control strip automatically. Both devices have a high speed of measurement in common and directly transfer the measurement data to the powerful but user-friendly Windows software TECHKON ExPresso or to other programs that control printing machines.

The world of TECHKON

As a long-established company we have more than 25 years of experience in the development and manufacture of high-quality spectral measurement technology.

One core area is the development of products for quality control in the printing industry. The color measurement instruments of the TECHKON Spectro series are regarded as the industry benchmark. A second focus is the product range of material analysis solutions with ElementCheck as our main product.

One of our specific strengths is our ability to tailor our solutions to specific applications. Our philosophy here: We observe and understand your application, deal with the complexity of the measurement technology and deliver you simple-to-use measurement solutions, which make your work safer, easier and more efficient.

Our philosophy for perfect measurement devices

As with all TECHKON-products, the innovative Spectro product series was designed by applying our four powerful principles for perfect measurement devices:

Easy and fast to use

High measurement accuracy

Solid and reliable

Functional and attractive design

The advantages at a glance

PRECISE

- Patented measurement head for exact and direct positioning
- Precise spectral engine
- Automatic measurement function displays always the relevant values
- Measurement values can be memorized with date and time tag
- Devices are factory-made calibrated permanently

FAST

- Immediately ready to use after switching on
- All measurement functions quickly accessible
- Quick measurement
- Up to 10.000 measurements per battery charge*
- Rechargeable high-capacity batteries; battery level control*
- USB port for easy and speedy transfer of measurement data to a PC

ROBUST

- Robust design for reliable function in a harsh industrial environment
- Durable precision; device is maintenance free

ERGONOMIC

- Ergonomically positioned, user-friendly measurement button
- Handy and compact
- Self-explanatory operation

VERSATILE

- Several dialog languages available
- Download of additional functions and device upgrades via PC
- Comprehensive software SpectroConnect included

* except for SpectroJet

TECHKON on the internet

Please visit our internet pages!

You will find useful information about the complete product range and themes of measurement technology. Download current program versions for the measurement instruments.

Or simply order your personal test device!

www.techkon.com

TECHKON GmbH
Wiesbadener Str. 27
D 61462 Königstein/Germany
Phone +49 (0)6174 9244 50
Telefax +49 (0)6174 9244 99
info@techkon.com
www.techkon.com

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