

TECHKON



**Digital MicroScope
TECHKON SpectroPlate**

**All colors under
perfect control**

**Precise . Effective . Reliable
Technology Made in Germany**

TECHKON SpectroPlate Digital MicroScope



SPECTRO
PLATE

Why measurements on printing plates ?

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. Thus the measurement of the right dot transfer on offset printing plates is a key segment of comprehensive process control in the printing industry.

However, measurement is only useful if the appropriate measurement technology is applied. Some years ago using densitometers on printing plates was common practice. But densitometers are designed for measuring on printed papers leading to limits when reading on plates. At present, plate measurement devices based on microscopic image capture and processing are the established standard.

TECHKON SpectroPlate unifies all advantages of this modern measurement technology in a compact, hand-held instrument.

How does SpectroPlate work ?

The measurement accuracy of a plate-measuring device is determined by the quality of the optical system and the performance of the image processing algorithms. SpectroPlate meets the highest standards in this respect.

The sample is illuminated uniformly with spectral broadband light. The microscopic image is captured by a precision optical lens system and a high resolution CMOS color matrix sensor with high dynamic range. The processing of the detailed color image is performed by a powerful graphic signal processor and sophisticated imaging algorithms. All relevant quality parameters for correctly manufactured printing plates are shown on the LCD display.

Versatile in use

Thanks to the excellent image capture quality and the ingenious graphic calculations, SpectroPlate can read precisely any screen size and screen technology: FM, AM or Hybrid screen. The spectrally white illumination and dynamic color evaluation permits reading all kinds of plate types and coated surfaces.

But it is not only plate reading where SpectroPlate shows its strengths. The multifunctional device handles dot measurement on film as well as on printed paper in CMYK-print excellently.

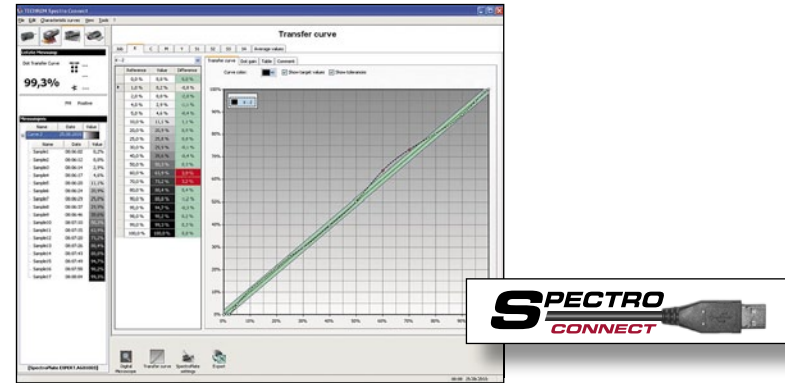
Portable Microscope

SpectroPlate lets you see things normally hidden to the human eye. It shows the raster dots on a film or a printing plate in large magnification on the device display or optionally on a computer screen. It lets you visually judge printing plates and discover any soiling or exposure errors now that the structure of the raster dots is visible.

A specific strength is the image transfer of uncompressed high-resolution files to the PC where they can be stored, edited or sent over the internet. Geometric sizes of dots or lines can be retrieved in micro-meter- or mils-dimensions.

Software SpectroConnect

The supplied Windows software connects the device to a PC. Measured values and transfer curves are displayed and stored. The display of comparisons to target values, the data export to Microsoft Excel™ and the compatibility to RIP-applications are additionally useful functions of SpectroConnect. An exceptional feature is the enlarged view of the microscopic images.



Versions and functions

SpectroPlate is available in three different types of performance packages:
 The entry-level model Start is for dot percentage measurements on all popular types of printing plates, film and CMYK print. The Expert-version additionally features the recording of complete transfer curves and the possibility to analyze geometric objects within the device. The All-Vision-model features supplementary the measurement of processless, low-contrast printing plates.

SpectroPlate Start

- % dot percentage
- Screen angle in °
- Screen frequency in l/cm and lpi

SpectroPlate Expert

Same functions as SpectroPlate Start and additionally:

- Dot % transfer curve
- Dot gain transfer curve
- Geometric analysis
- Memory for 100 data sets

SpectroPlate All-Vision

Same functions as SpectroPlate Expert and additionally:

- Measurement of chemistry-free, processless plates with very low visible contrast.

The Start-version can easily be upgraded to an Expert-model by a post-purchase upload from the PC. All-Vision functionality is achieved by a hardware expansion.

All three types can be connected to the Windows Software SpectroConnect which is included in the package.

All devices are factory-calibrated to the official reference Fogra Measuring Bar FMB resulting in high long-term absolute accuracy and an excellent inter-instrument agreement. Additionally, time-consuming calibration procedures prior to measurements are obsolete.

Software

SpectroConnect

System requirements: Windows XP, Vista or 7

Contents

- Measurement device SpectroPlate
- Charging console with white standard and AC-adapter with universal plugs
- Carrying case
- USB cable
- CD with software SpectroConnect
- Manual with ISO 9000 compliant certificate

Specifications

Measurement technology	High-precision optical system with high resolution digital camera and digital image processing
Image capture	1024 x 1024 pixels, 16 million colors, RGB uncompressed
Measurement aperture	1 x 1 mm, direct positioning with viewfinder, real-time image preview captured in LCD graphic device display
Light source	Homogeneous spectral-broadband LED illumination
Measurement time	Approx. 1 second per measurement
Calibration	Factory-made calibrated permanently to Fogra Measuring Bar FMB, white standard in charging console
Measurement range dot %	0.0 – 100.0 %
Screen ruling range	AM: 30 – 150 l/cm, 75 – 380 lpi; FM: 10 – 70 microns
Measurable media	Offset printing plates, CtP and conventional; film in transmission and reflection, printed paper CMYK
Memory	100 data sets (only Expert- and All-Vision-version)
Repeatability	± 0.5 %
Display	High-contrast backlight LCD graphic display, 240 x 160 pixels, 16 gray levels, contrast ratio adjustable
Power supply	Rechargeable NiMH battery, controlled recharge via charging console with AC adapter, 100 – 240 V, 47 – 63 Hz, up to 10.000 measurements per battery charge, battery level control
Communication Port	USB
Weight	530 g (1.2 lbs)
Dimensions	65 x 65 x 190 mm (approx. 2.6 x 2.6 x 7.5 inch)
System requirements	for software SpectroConnect: 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!

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