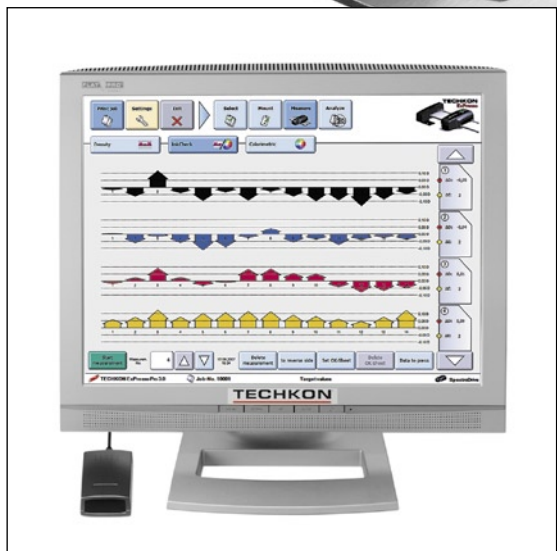




**Scan-Measurement-System
TECHKON SpectroDrive**

**SPECTRO
DRIVE**

SpectroDrive - Quality on the fast track



TECHKON®

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.

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, 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.



Four axioms for perfect measurement devices

TECHKON, is a leading innovator for measurement devices made in Germany, with over 25 years of experience in the development and manufacture of high quality products for the printing industry. All of our products perform to the "four basic rules of perfect measurement" established by TECHKON:

1. easy and quick operation
2. high measurement accuracy
3. robust engineering and reliability
4. ergonomic and functional design

With high speed to quality

Modular and compact

- works with any sheet or press format
- horizontal track can be shipped in any length
- space-saving measurement device fits on any table
- delivery contains all components supplied in a practical carrying case

Easy to handle

- fast, motorized scanning by pressing the green measurement button on touch-screen or on the device itself
- automatic white calibration
- TECHKON ExPresso PC-software can be operated with or without the touch-screen
- the device can easily be used as hand held device for spot measurements as well

Easy to install

- installation is complete within five minutes without any major assembly effort
- complete system is maintenance free
- measurement system can be flipped 180°, if the color bar is on the opposite side of the printed sheet
- wireless, fast data transmission; no cable required
- the mounting table can be inclined up to 45°
 - no vacuum air suction is necessary to hold down the printed sheet



Complete measurement information

- any color bar can be measured
- color bar can be at any location on the printed sheet
- no limitation in paper thickness
- automatic polarizing filter function for densitometric and colorimetric measurements

Accurate

- precise spectral engine with automatically insertable polarizing filter
- patented measurement head for easy positioning conforming to ISO and DIN standards
- UV cut filter option available
- robust design for reliable function in a harsh industrial environment

Fast

- high resolution spectral measurement of a complete color bar within seconds (e.g. 500 mm in only 4 seconds!)
- online-wireless data transmission during scan
- information overview displays relevant parameters for quality control



See how fast the scanning system turns into a hand held unit.

Just lift the SpectroDrive from the track and take single measurements.

Using SpectroDrive as a hand held unit is simple. Just position the compact measurement head above the sample and press the green measurement button. The measurement value is transmitted instantly to the PC.

TECHKON SpectroDrive is delivered as a complete turn-key system. Within a few minutes the system is up and running.

One unique feature of SpectroDrive is its flexibility to be used with any press type or format.

SpectroDrive is the ideal extension to TECHKON's renowned hand held instruments: **SpectroPlate** is the perfect tool for accurately reading printing plates and **SpectroDens** is the mobile, multi-purpose spectro-densitometer, which can be used at any location.

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

2 x 1,5 mm

appropriate for measuring patches with at least 4 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

Approximately 150 mm/s (equals approx. 4 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

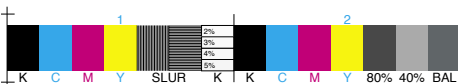
A, C, D50, D65 / 2°, 10°

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



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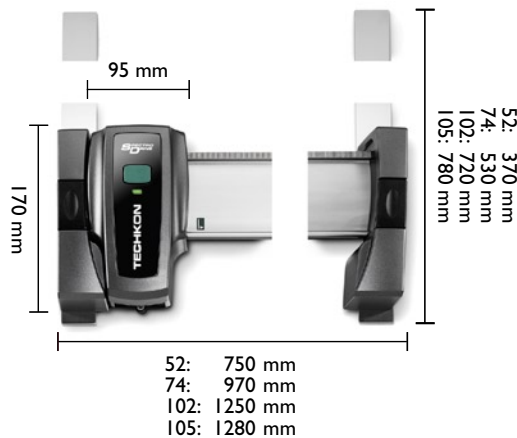
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Specifications can be subject to change without notice.

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Dimensions



Formats

52: for printed sheet 00 (B3+, 370 x 520 mm)
74: for printed sheet 0B (B2+, 520 x 740 mm)
102: for printed sheet 3B (B1+, 720 x 1020 mm)
105: for printed sheet 3B+ (B1+, 780 x 1050 mm)

Repeatability

0,01 D
0,03 CIE ΔEab

Production spread

0,01 D
0,3 CIE ΔEab

Data transmission

Module for wireless data transmission with PC-sided USB connection

Power supply

Rechargeable NiMH battery, regulated recharge via charging console with AC adapter, 100 – 240 V, 47 – 63 Hz

Weight

Measurement device: 820 grams

Contents

Measurement device SpectroDrive, charging console with white standard, universal AC adapter, horizontal track with holder, 2 vertical bars, module for wireless data transmission, USB cable, carrying case, manual with ISO 9000 certificate

Special formats (up to 2100 mm) on request

Software TECHKON ExPresso

Delivery on CD with program protection key (USB dongle) plus CD with TCS Digital System requirements: Windows XP, Vista
Recommended touch-screen: Elotouch I727L 17"

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 versions available:

SpectroDrive + ExPresso Basic consists of the spectral measuring 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 and printing contrast
- slur/doubling value
- target values, references, tolerances, OK sheet
- front- and reverse printing
- works with any color bar and sheet format
- display of single measurements when used as a hand held device
- supports up to 6 printing units

SpectroDrive + ExPresso Pro

contains the same functions as the "Basic" package and additionally:

- ink zone specific colorimetric ΔE display, Lab, LCh, ΔLab, ΔLCh
- "InkCheck" recommendation for ink key setting
- display and evaluation according to ISO 12647, Gracol G7™
- measurement data export (e.g. JDF-format)
- statistical analysis and report generator
- supports up to 16 printing units

Please visit our web site !



www.techkon.com

TECHKON®

Measurement technology
on the highest level