



KONICA MINOLTA

# Auto Scan Spectrophotometer **FD-9**

Ultra-high-speed measurements of calibration, profiling and quality control charts.



Giving Shape to Ideas

# Fast, Versatile & Connected

The key to success for a modern professional print business is automation and accuracy. The Konica Minolta FD-9 Autoscan Spectrophotometer is the ideal tool for print colour management, combining speed, accuracy, ease-of-use and versatility.

## → Fast

The FD-9 reads 1,500 patches in just 4 minutes and 2,500 patches in just 7 minutes. Within one single scan users obtain data for M0, M1 and M2, conforming to ISO13655:2009 and offering improved certainty of colours and OBA.



## → Versatile

The FD-9 uses a free-format-function enabling it to measure virtually every chart that might be used to calibrate printers and create profiles.

Even quality control wedges, used for conformance testing of proof prints, etc., can be measured with the FD-9 without cutting them from the print.

The FD-9 can measure a wide range of substrates which makes it the ideal instrument for proofing, production and Large Format Printing applications.

Users can obtain amazing results and achieve the best possible neutral grey balance and flawless skintones in even non-standard viewing environments. Konica Minolta's Virtual Fluorescent Standard (VFS) allows the creation of precision custom profiles to compensate for the environment where the print will be viewed.

## → Designed for Usability

The integrated image scanner enables automatic chart alignment and can read QR codes for fully automated sheet and chart identification.

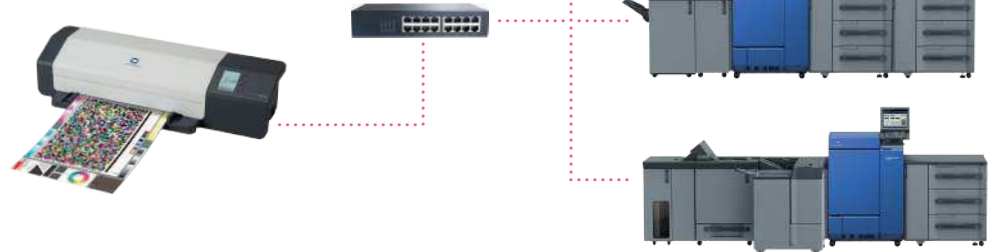
The colour display shows step by step instructions to the operator, improving usability and minimising the opportunity for user error. The results of a quality control evaluation can be viewed directly on the display<sup>\*1</sup>.



<sup>\*1</sup> Depends on the software that is used with FD-9.

## → Connected

The FD-9 features both USB and Ethernet connectivity enabling you to easily share one FD-9 between multiple printing machines.



## → Accuracy assured

Like the groundbreaking FD-7, the FD-9 features built-in wavelength calibration and temperature drift compensation, maximising day-to-day accuracy and reliability.

For repair, certification and adjustments to absolute accuracy, Konica Minolta offers worldwide standardized service for all instruments. Users can be confident of Inter Model and Inter Instrument Agreement between the FD-5, FD-7 and FD-9 to offer their customers true local or global consistency.



Users who want to monitor and audit the absolute accuracy of the system on a regular basis will benefit from the optional self-check function of FD-9. Self check uses certified BCRA tiles specifically designed for FD-9 to monitor the accuracy at any time.

## → Full automation

Measuring a large number of patches with FD-9 is both fast and convenient. Users who need to measure dozens of sheets every day can benefit from using the Automatic sheet feeder, a first for a print colour measurement instrument. This optional accessory enables up to 100 sheets to be pre-loaded and measured with minimal user input. Combined with the QR code reader function, the measurement results can be automatically inked to the printed sheet.



Specifications	Autoscan Spectrophotometer FD-9
Illumination / viewing system	45°: 0°(annular illumination) <sup>1)</sup> Conforms to CIE No. 15, ISO 7724/1, DIN5033 Teil 7, ASTM E 1164 and JIS Z. 8722 Condition A for reflectance measurements.
Spectral separation device	Concave grating
Wavelength range	380 to 730 nm
Wavelength pitch	10 nm
Half bandwidth	Approx. 10 nm
Measurement area	Approx. 3 mm
Light source	LED
Measurement range	Reflectance: 0 to 150%
Short-term repeatability	Colorimetric: Within $\Delta E_{00}$ 0.05 (Without polarization filter) * Under Konica Minolta test conditions where a white calibration plate is measured 30 times at 10 second intervals after white calibration
Inter-instrument agreement	Within $\Delta E_{00}$ 0.3 (Average of 12 BCRA Series II colour tiles compared to values measured with a master body under Konica Minolta standard conditions; without polarization filter)
Measurement time	Approx. 4 min per 1,500 patches (Konica Minolta measurement conditions <sup>2)</sup> )
Output item	Spectral reflectance
Measurement conditions <sup>2)</sup>	M0 (A), M1 (D50), M2 (A + UV filter), C, ID50, D65, ID65, F2, F6, F7, F8, F9, F10, F11, F12, User-defined light source
Backing condition	White backing, compliant with ISO13655
Interface	USB2.0, 10Base-T/100Base-TX
Power	Specified AC adapter (Input: AC 100 to 240 V, 50/60 Hz; Output: DC 24 V, 5 A)
Size	FD-9 only: W 716 x D 251 x H 159 mm   Auto Sheet Feeder: W 601 x D 1,158 (when tray is open) x H 245 mm
Weight	FD-9 only: Approx. 10.5 kg
Operation temperature / humidity range	10 to 35°C, 30 to 85% relative humidity with no condensation
Storage temperature / humidity range	0 to 45°C, 0 to 85% relative humidity with no condensation
Standard accessories	AC adapter, USB cable, Measurement Utility Software FD-S2w
Optional accessories	Auto Sheet Feeder FD-A09

Measurable Chart Specifications	
Width	45 to 330 mm
Length	170 to 1500 mm
Thickness	0.05 to 0.45 mm
Smallest patch size	6 x 6 mm or larger
Maximum patches per sheet	1,394 (A4) / 2,928 (A3)


Main specifications of the Software FD-S2w		
Operating environment	OS	Windows 7 / Windows 8.1 / Windows 10 / Mac OS X 10.9-10.12
	CPU	1 GHz or faster processor
	Memory	1 GB or more (32 bit) / 2 GB or more (64 bit)
	Hard disk	At least 8 GB of available disk space
	Display	Display unit capable of showing at least 1,024 x 768 dots
	Interface	USB 2.0, 10Base-T/100Base-TX
Compatible Instruments	FD-9 ; FD-7 / CL-500A (Readout only for user-defined light source)	
Features	Chart creation, chart measurement, measurement data display, measurement file output, QR code creation	
Displayed measurement data	Spectral reflectance, colorimetric value, density	
Measurement conditions <sup>2)</sup>	M0 (A), M1 (D50) , M2 (A + UV filter), C, ID50, D65, ID65, F2, F6, F7, F8, F9, F10, F11, F12, User-defined light source	
Illuminant	A, C, D50, ID50, D65, ID65, F2, F6, F7, F8, F9, F10, F11, F12, A + UV filter, User-defined light source	
Observer	2° or 10° Standard Observer	
Colour space	L*a*b*, L*C*h, XYZ	
PC supported languages	English, French, German, Spanish, Japanese, Chinese (Simplified)	
Output format	CxF3: ISO17972-1:2015; CGATS: ISO28178:2009 (ANSI CGATS-17); FD-S2w original format (csv/tsv)mm	

<sup>1)</sup> Illumination for wavelengths under 400nm is unidirectional.  
<sup>2)</sup> M0, M1, and M2 are measurement conditions described in "4.2.2 Illumination requirement and measurement conditions" in ISO 13655.  
<sup>3)</sup> Paper size: A3, patch size: 6mm x 6mm, patch arrangement: 47 rows x 37 columns  
 • Specifications are subject to change without prior notice.

### SAFETY PRECAUTIONS

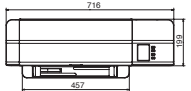
For correct use and for your safety, be sure to read the instruction manual before using the instrument.

- Be sure to use the specified power supply voltage. Improper connection may cause a fire or electric shock.

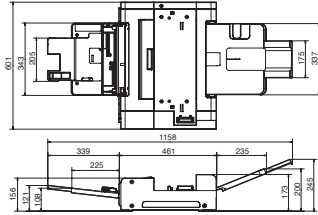


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### < Dimensions in mm >

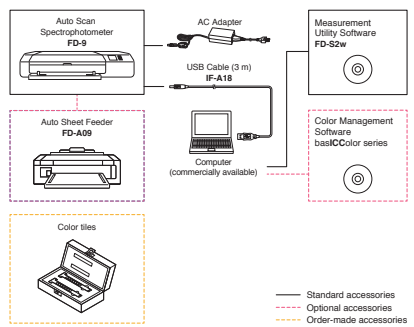


Auto Scan Spectrophotometer  
FD-9



Auto Sheet Feeder  
FD-A09

### < System Diagram >



Standard accessories  
 - - - - - Optional accessories  
 - - - - - Order-made accessories

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<http://konicaminolta.com/instruments/network>

