

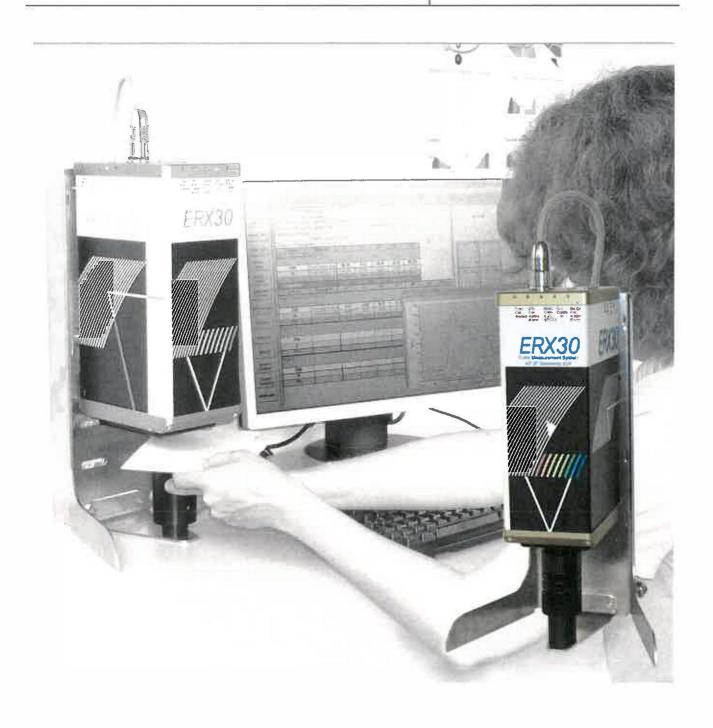
Faculty of Textile Engineering TU Liberec XXXXXXXXXXXXX

Studentská 1402/2

461 17 LIBEREC 1 Czech Republic Laboratory color control system

Martinsried, 13.February 2019

Quotation No. 9622 V.1





Introduction

X-Rite GmbH is the global leader when focussing on color measurement directly on the production machine.

The systems are used worldwide in different industries, especially textile manufacturers, automotive industry, paper mills, glass coaters, plastic film and sheet producers, coil coating mills and others. More than 600 installations around the world prove the reliability of the systems and provide a good reference.

Sales, engineering, installation and service worldwide are provided from one hand. Our turn-key solutions include Laboratory system, In-Line color measurement, Closed Loop Color Control, connection to any process control system and to other external signals like reel change or paper break, dye pumps and interface.

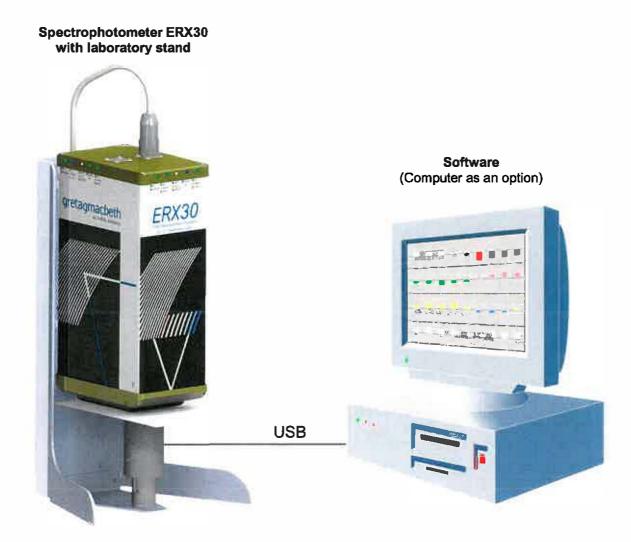
The EN 20471 standard specifies a D65 illumination. In the ERX30 the Xenon flash lamp will provide a very good correlation to the D65 standard in the visible range. The UV intensity can be adjusted to D65 with a fluorescent standard. This ensures very reliable measurements with very good interinstrument agreement. A single layer is measured over a black hole (Reflectance <0,04) and the software calculates the luminance factor (β) as well as the x/y coordinates for D65/2°. The results are displayed graphically in an x/y-chart, in a β -chart, shown in a table as numerical measurement and a pass / fail ranking is given according to the EN20471 standard.

This ensures easy handling in daily use for each laboratory.

Your contact at X-Rite



System Overview (Scope of delivery)





System Components

Item Qty. Type Description EURO

1.1 1 ERX30 Spectrophotometer ERX30

Precision laboratory color sensor (spectrophotometer), measurement of samples with or without optical brightener in reflectance. Dual- beam system with standardized 45°(circumfential):0° geometry. The sample is placed on to the instrument, measurement diameter 10 mm, wide spectral range from 330 nm to 730 nm, highest spectral resolution of 1 nm, internal automatic calibration of the wavelength scale and reflectance scale. Temperature range from 5°C to 45°C. No warm-up time at any temperature.

1.2 1 EHX30 <u>Laboratory support with computer interface</u>

For spectrophotometer ERX30, including interface converter PC - measurement head ERX30, USB connection to PC, memory for automatic backup, power supply 100VAC - 240VAC.





1.3 1 ES15WIN Color measurement software ESWin

To store and display measurements from Spectrohotometer and/or Glossmeter For Windows 7 (32/64 Bit) or higher Colorimetrics: CIELab, DIN 99, CMC, ISO 105 Illuminants: D65, A, F11, C Additional calculations: Metamerism

Brightness according to Tappi

Whiteness according to ISO, CIE, Ganz/Grieser,

Berger, Yellowness

4 fields to define samples + 1 memory field Storage of meas. data in a Microsoft Access data

Customized adaptation: one monitor display, one printout, one user profile setting additional adaptations, charged by hour Note: Prerequisites Microsoft Excel 2007 or higher

1.4 1 EAI Installation and Training

Installation of software on a customer supplied computer system and printer, training on the system

(1 man day on site, 1 man day travelling), including all costs for accommodation and travelling.

Price of the system:

25,500.00



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Recommended Option Hardware and Software **Maintenance Contract:**

2.1 1 **MCCIL**

Maintenance MC CIL: Annual Check of the ERX30 System at X-Rite GmbH (Annual maintenance fee):

- Repeatability
- Absolute value against color standards
- Test certificate (e.g. for ISO 9000)
- Test of flash light and capacitor
- Inside cleaning of the instrument

Necessary repairs will be carried out.

Spare parts and labor for repairs are invoiced separately.

Possible necessary additional maintenance is not included in this contract.

Our service team will call to schedule an appointment time.

With-out a service contract, pricing for an annual check will increase by 200 €!

The following items will be covered:

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2.2 1 WARTSW Software Contract:

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Software contract includes:

- Free of charge application support by telephone, or e-mail.
- Reaction time to support issues within 24-

hours

(except of German bank holidays and Saturdays).

- Support via telephone, e-mail or remote connection.
- Free of charge software updates to download.



Minimum Hardware Requirements:

3.1 EZSPEC Specs for the computer

min. 2 GHz, 80 GB HDD, 512MB RAM (depending on Windows version), one USB interface for the spectrophotometer; if required one serial interface for the CLCC, USB port for hardlock key, CD ROM drive, mouse, keyboard, 17" monitor, for CLCC 19" monitor Operating system: Windows 7 (32/64 Bit) or

higher

Software: Microsoft Excel 2007 or higher





We reserve the right to modify our equipment at any time without

prior notice.

All prices are in € (net). Price changes and errors reserved.

(V0.2.4; 31.8.2015)

FOR EXPORTATION AUTHORIZATION OF

X-Rite GmbH IS MANDATORY.

Delivery Time: approx. 10 weeks after order confirmation and verification of all

technical details

Warranty: 12 months after delivery, referring to Pos.VIII of the "General

Conditions" from ZVEI

Payment: Invoicing with delivery, 30 days net from date of invoice. Subject to

approval by the X-Rite Finance department.

Optionally we can offer a finance contract through one of our

partner banks.

Pricing: Ex Works X-Rite GmbH, D-Martinsried

(EXW according to Incoterms 2010)

General Conditions: Exclusive place of jurisdiction in case of all litigations shall be

Munich, Germany. Only the "General Conditions of Supply and Delivery for Products and Services of the Electrical Industry" of the

ZVEI, Germany (Electrical and Electronic Manufacturers Association) apply for this business. If the installation of the systems at the customer's place is not possible within 4 months

from shipment

(no fault of X-Rite GmbH), the system will be considered to be

accepted by the customer.

Title & Risk of Loss: Title to each product shall pass to purchaser upon delivery to the

carrier at the point of shipment. Risk of loss or damage to any of the Products in transit is the purchaser's, whose responsibility it will be to file claims with the carrier. Delivery of each individual product or service on this quote shall be deemed a separate transaction,

and to have occurred upon passage of title.

Validity of Quotation: 6 weeks

Best regards

In-Line

13.02.2019