

COLORSTAR TYPE CJ

ONE POSITION LABORATORY DYEING APPARATUS

EFFICIENT APPLICATION

A wide range of factors and parameters related to modern exhaust dyeing applications can only be found with the aid of precise and perfectly functioning laboratory dyeing apparatus. Detecting and finding the real sources of dyeing errors still at the laboratory level results in considerable savings of time and cost.

The COLORSTAR type «CJ» helps to optimise not only the dyeing process but also allows evaluation of the economic and ecological aspects of modern exhaust dyeing.



POSSIBLE APPLICATIONS

A vast selection of machine versions and versatile accessories means that the COLORSTAR «CJ» can be constructed practically and tailored to customer requirements.

On one hand, the COLORSTAR «CJ» is used to dye:

- yarns as a bobbin
- woven and knit goods treated as a beam
- loose material, fibres and worsted tops in the dye basket

For liquor ratio of approx. 1:8 and higher

On the other hand, it is used to carry out:

- permeability tests

In combination with «SMARTLiquor®»

- For spectrophotometric analysis of the dye bath

SCOPES OF APPLICATION

The COLORSTAR type «CJ» as a one position laboratory dyeing apparatus is excellently suitable for use in mill laboratories and development departments but also in research institutes and training centres for the textile industry; and this in a HT temperature range of up to 135 °C.

Whenever two dye positions are required, the COLORSTAR type «CJT-R» is used.

WELL-ENGINEERED FUNCTION PRINCIPLE WITH IMPRESSIVE ACTION

The dyeing principle

The dyeing principle works according to the bobbin and beam principle and the exhaust dyeing method. The dye liquor is pumped through the non-moving material.

The integrated vacuum pressure pump creates the required atmosphere in the treatment room.

Reversible flow

The flow direction is reversible from inside to outside and vice versa. The time cycle for each flow direction can be varied independently.

The centerpart of the liquor circulation is a gear wheel pump which is magnetically driven and therefore it operates without leakage problems.

Reproducible liquor quantity

The main advantage of the gear wheel pump is that the delivery pressure is independent of the liquor quantity delivered. Also, a change in pump speed results in an almost proportional change in the liquor quantity delivered.

Due to this fact, the liquor quantity is highly reproducible.

Regulated dosing

By means of the «Univision Touch S» process controller, the process by which chemicals are added is controlled in either a progressive, linear or degressive manner.



«CJ-R 1000» in combination with SMARTLiquor®

OPTIONAL, PROCESS-ORIENTATED ADD-ON COMPONENTS

- Control system for flow rate and differential pressure including special reversing device
- pH measuring
- Conductivity measuring
- PC visualisation software for recording and registration of parameters (°C, l/min, bar, pH)
- Optional connection for «SMARTLiquor®», the system for spectrophotometric analysis of the dye bath
- Dye beams, dye baskets, liquor displacement bodies for piece goods, bobbins and loose materials

Dosing systems

- Lock 150 ml with regulating valve for additions
- Automatic dosing pump for adding chemicals from 25 ml reagent glass
- Hand syringe 10 ml for adding chemicals by hand
- Dosing unit «DOSIMAT» for automatic dosing via the external liquor circuit
- External liquor circuit for adding chemicals or taking out dye liquor with a liquor draw valve or hand syringe (transmission measurements, pH control, conductivity measurements)



Laterally fitted automatic dosing pump



150 ml lock with regulating valve for additions



External liquor circuit / pH monitoring



«UNIVISION TOUCH S» - THE USER-FRIENDLY PROCESS CONTROLLER

The programmable «UNIVISION Touch S» process controller is optimally adapted to the requirements of its user and to the functionality of the COLORSTAR. It is very simple in operation, thanks to:

- Clearly laid out graphic illustration of the process with all functions.
- Simple and easily remembered function pictograms.
- Menu-driven parameter entry.
- Updating and display of all process data during the operation.
- Information displays (error and fault displays) in plain text.
- Call up of a comprehensive help.
- Update-capable software.
- Import and export of process data to other «UNIVISION Touch S» or to PC.

The COLORSTAR in combination with the «UNIVISION Touch S» is ready for the present as well as future processes in your business.

OPTIONAL FUNCTIONS OF THE «UNIVISION TOUCH S»

Process programmer

Recurring processes consisting of several treatment intervals can be saved and recalled when required.

Day and week programmer

Not only recurring individual processes, but also complete day and week programs can be predefined and started. For example, the COLORSTAR can already be preheated at the start of the week before work begins.

Process control using PC

It is possible to connect the «UNIVISION Touch S» with a LAN network using Interface RS232C or Ethernet Interface TCP/IP connection. Process data as well as complete programs are thus created centrally and transferred to the «UNIVISION Touch S». Even a running process can be changed this way. Over a connected PC e.g. reports of the processes of the «UNIVISION Touch S» can be created for ISO 9001.



«UNIVISION TOUCH S» the clear, user-friendly process controller



TECHNICAL INFORMATION

Besides their dimensions, the individual «CJ» and «CJ-R» sizes differ mainly in the capacity of the dye vessel and the liquor circulation. The following is a list of the production data of the COLORSTAR «CJ-1000».

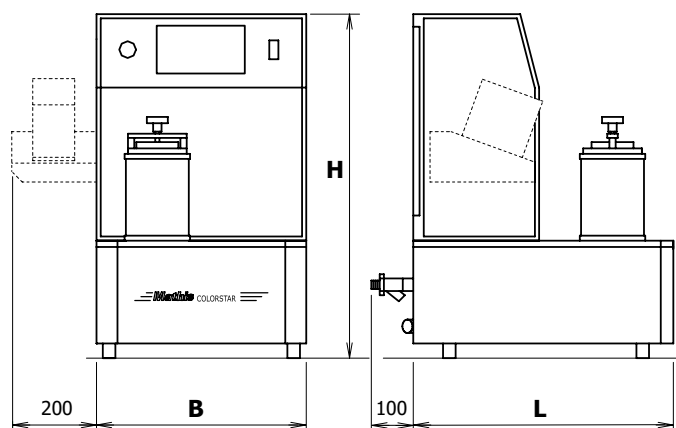
Type «CJ 1000»	
Temperature range:	up to 135 °C
Temperature gradient:	0.3 – 4 °C/min
Capacity of dye vessel:	1000 ml
Liquor circulation:	3.0 l/min
Liquor ratio:	~1:8 to 1:20 depending on material
Liquor circulation:	outside/inside and inside/outside

«UNIVISION Touch S»

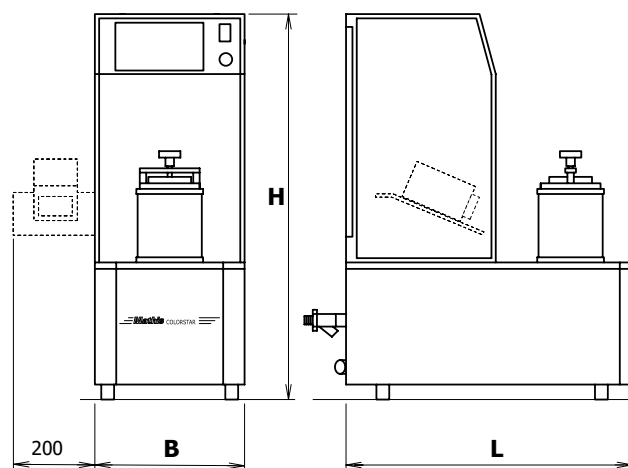
Operating system:	Windows CE
Storage capacity:	16 MB RAM
Touchscreen:	5.7" TFT
Interfaces:	TCP/IP connection (Ethernet Interface), USB

Principle dimensions and weights without optionally installed accessories

	Type «CJ-R 1000»	Type «CJ-R 2000»	Type «CJ-400»	Type «CJ-1000»	Type «CJ-2000»	Type «CJ-3000»
Length L	620 mm	620 mm	670 mm	670 mm	620 mm	620 mm
Width B	500 mm	500 mm	350 mm	350 mm	350 mm	500 mm
Height H	820 mm	820 mm	900 mm	900 mm	980 mm	1120 mm
Weight	~70 kg	~75 kg	~60 kg	~65 kg	~70 kg	~80 kg



Dimensional drawing to Colorstar «CJ-R»



Dimensional drawing to Colorstar «CJ»

FURTHER DOCUMENTATION

Laboratory beaker dyeing apparatus LABOMAT Type «BFA»

Laboratory beaker dyeing apparatus type «P» for samples of approx. 40–120 g

Laboratory jet dyeing apparatus type «JFL» for samples of approx. 40–100 g

Jet dyeing apparatus type «JFO» for samples of approx. 100–1000 g

Jet dyeing apparatus type «JFP» for samples up to approx. 3 kg

Bobbin dyeing apparatus type «SFA» for goods up to approx. 1 kg

Drum dyeing apparatus type «TWA» for various capacities

SMARTLiquor®

Werner Mathis AG

Rütisbergstrasse 3
CH-8156 Oberhasli/Zürich, Switzerland
Telefon: +41 44 852 50 50
Telefax: +41 44 850 67 07
E-mail info@mathisag.com
www.mathisag.com

Werner Mathis U.S.A. Inc.

2260 HWY 49 N.E./P.O. Box 1626
Concord N.C. 28026, U.S.A.
Phone: +1 704 786 6157
Fax: +1 704 786 6159
E-mail: usa@mathisag.com

Aparelhos de laboratorio Mathis Ltda

Estrada dos Estudantes 261
CEP 06700 COTIA S.P., Brasil
Phone: +55 11 4612 2333
Fax: +55 11 4612 2598
E-mail: brasil@mathisag.com

Mathis (India) PVT. LTD.

203, Swastic plaza
Pokhran Road No. 2, Thane 400 601
Phone: +91 22 2585 4304
E-mail: india@mathisag.com