

UNIVERSAL STEAMER TYPE «DH» / «DHe»

TREATING MATERIAL SAMPLES IN A CONTROLLED STEAM ATMOSPHERE

EFFICIENT APPLICATION

Owing to its minimal space requirement and simple operation, the Universal steamer type «DH» or «DHe» can be used both in mill laboratories and in research institutes.



POSSIBLE APPLICATIONS

The Universal steamer type «DH» / «DHe» is equipped with the «UNIVISION» process controller. This gives it wide adjusting ranges for temperature, humidity, dwell time and fan speed. Single and serial trials with small material samples are possible with the «DH» / «DHe».

The «DH» / «DHe» is used for the following operating procedures:

- High-temperature steaming, i.e. short time curing and setting of printings and pad dyeings in superheated steam (hydro-dry) within a temperature range of 100 – 250 °C and at a steam content between 10 and 100%.
- Optional additional components enable treatments in the Ecocontrol procedure at low steam content of 25% for reactive dyes. They also enable moisture crosslinking according to the MXL procedure.
- Drying, curing and setting at temperatures up to 250 °C.
- Steaming with saturated steam (100 °C).

SCOPES OF APPLICATION

The scopes of application of the «DH» / «DHe» are the textile industry, the pharmaceutical industry, film and paper manufacturers, but also research institutes and development departments for a wide range of industries.

TREATMENT IN A CONTROLLED STEAM ATMOSPHERE

Sample preparation

The material sample with a maximum size of 33 × 43 cm is fixed on the required material holder. The material holder is attached to the transport frame.

Process flow

The necessary process parameters such as dwell time, temperature and fan speed are entered at the «UNIVISION Touch S» of the process controller.

The start button is pressed, the transport frame moves into the treating chamber. This starts the treatment process. At the end of the process the transport frame moves out automatically. In both end positions, in and out, the entrance slit is closed, no steam escapes.



«DH» / «DHe»

treatment of material samples in a controlled steam atmosphere.

THE TREATING CHAMBER ON THE «DH» / «DHe»

Regulated electric heaters on the ceiling and at the entrance slit of the treating chamber prevent the steam from turning into condensation. This means that no condensed water will drop onto the material sample.

An efficient circulation fan, combined with heating at an ideal setting, enables various materials to be treated at optimum conditions.

On the «DH» type, the sump is heated indirectly by external steam, thus filling the treating chamber. External steam can also be fed directly to the treating chamber however.

On the «DHe» type, saturated steam is introduced directly into the treating chamber by the built-in steam generator.

OPTIONAL, PROCESS-ORIENTED ADD-ON COMPONENTS

Econtrol procedure

Econtrol is a specially designed procedure for the economical and ecological dyeing of cellulose fibers such as cotton and viscose, as well as their blends, at a low steam content of 25% for reactive dyes.

MXL procedure

MXL stands for «moisture cross linking» and is a specially designed procedure for the economical and ecological fine processing of cellulose fibers such as cotton and viscose, as well as their blends, at a low steam content of 25%.

Infrared radiation pyrometer

For contactless measurement of the sample surface temperature. The IR radiation pyrometer enables the exact, current surface temperature and the resulting residual humidity to be determined.

The emission factor can be individually adjusted according to the sample being treated using the «UNIVISION Touch S» process controller.

Electric steam generator

The «DHe» type is equipped with an integrated electric steam generator.

This makes the «DHe» independent of a steam system. The steam quality is also constant.

Exhaust steam cooler

Reduces the amount of exhaust steam escaping. This option is therefore recommended wherever there is no suitable suction device.

Material holders in various designs

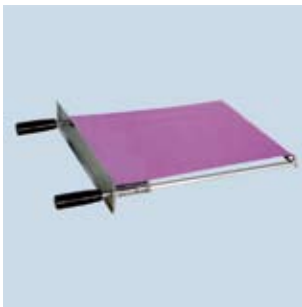
Material holders such as pin frames adjustable in length and width, pin frames adjustable in length and sieve frames are available for standard sample sizes.



Additional process-oriented components, mounted on the «DH» / «DHe» cover.



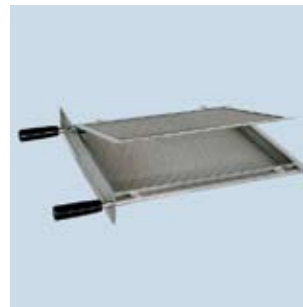
MATERIAL HOLDER



Pin frame, length-adjustable
«NR-L»

Material holders for woven goods and materials that is dimensionally stable.

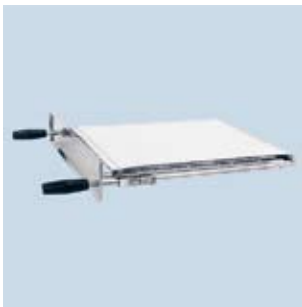
Material size: max. 33 x 43 cm



Sieve frame «SR»

The sieve frame with removable top part is suitable for inserting loose goods.

Material size: max. 30 x 35 cm



Pin frame, adjustable in length and width
«NR-L+B»

Material holders for knitted goods and materials that is not dimensionally stable.

Material size: max. 33 x 43 cm



«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 «DH» / «DHe». 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 (errors 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.

Combined with the «UNIVISION Touch S», the «DH» / «DHe» is ready for the present as well as future processes in your business.

OPTIONAL FUNCTIONS OF THE «UNIVISION TOUCH S»

Process programmer

Recurrent processes, consisting of one or several treating intervals, can be saved and retrieved when necessary.

Day and week programmer

Not only recurring individual processes but also complete day and week programs can be predefined and started.

Process control using PC

It is possible to connect the «UNIVISION Touch S» with a LAN network Ethernet TCP/IP interface 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. Using a connected PC, reports of the processes of the «UNIVISION Touch S» can be created for ISO 9001 for example.



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

OTHER DOCUMENTATION

Mini Pad Steam Range type «TPS»

Laboratory pad steam range type «PSA»

High-temperature laboratory steamer type «GD»

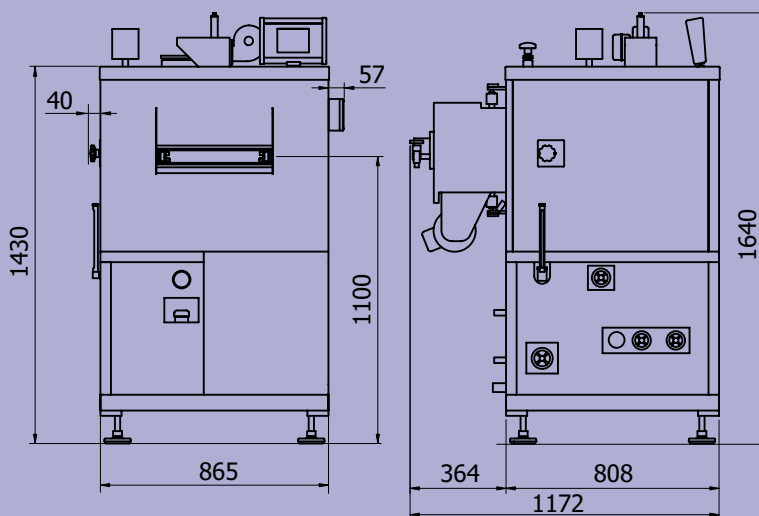
«LTE» type LABDRYER

TECHNICAL INFORMATION

	Typ «DH»	Typ «DHe»
Sample size:	max. 33 x 43 cm	max. 33 x 43 cm
Temperature range:	up to 250 °C	up to 250 °C
Dwell times:	5 s - 999 min	5 s - 999 min
Steam content:	10 - 100 %	10 - 100 %
Steam consumption:	8 kg/h	8 kg/h
Heating power of steam generator:	-	~7.5 kW
Motor power of fresh air dryer:	1.0 kW	1.0 kW
Heating power of circulating air:	~8.5 kW	~8.5 kW
Weight:	~280 kg	~320 kg

«UNIVISION Touch S»

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



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