ED 200

Drying and storage cabinets for endoscopes

After reprocessing, the endoscope is immediately ready for use. The reprocessed device should be dried and stored in aseptic conditions within a drying storage cabinet.

The ED 200 drying cabinet dries and stores flexible endoscopes keeping them in aseptic conditions while waiting for the next patient.

Aseptic storage time is **independently certified up to 720 hours**.

Steelco ED 200 drying cabinets have this function and thanks to a PLC microprocessor supervision, they monitor the timing and the store conditions of the endoscopes while waiting for the reuse.

The model ED 200 is available in different storage configuration as single or side-by-side double module.

The double module version reduces the used space by sharing the space of the central control module. They are configured in a more compact frame that combines two devices into a single unit (1.672mm width) though being two independent units regarding all other aspects: mechanical, connections, control panels….

Models

Single device - 8 endoscopes capacity

ED 200/1 single drying cabinet

ED 200/2 single cabinet two doors pass-through version

Combined device - 16 endoscopes capacity

ED 200/3 double cabinet two doors

ED 200/4 double cabinet four doors pass-though version

Versions

The cabinets can be equipped with **containers** with cover (cassettes) or stainless steel **net** **baskets** with lower trays for water dripping.

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Capitale sociale Euro 3.000.000,00 i.v. C.F., P.IVA e Numero Registro Imprese di Treviso: 04311220265 REA TV 339832

ISO 13485:2003 ISO 9001:2008

Specifications:

Dimensions:

Drying/storage chamber

600 x 600 x 1400h

ED 200/1: 962 x 785 x 1900h mm

ED 200/2: 962 x 835 x 1900h mm

ED 200/3:1672 x 785 x 1900h mm

ED 200/4:1672 x 835 x 1900h mm

Weight

Cabinet with single storage chamber Kg 200

Cabinet with double storage chamber Kg 380

Noise:

45 dB

Drying:

Instrument channels purging with high pressure sterile HEPA H14 filtered air.

The device is also equipped with an efficient warm air flow that dries both the chamber and the endoscopes exterior.

Directives and Technical norms conformity

It is classified on I class, according to the annex VI 93/42CEE Medical Device, designed and manufactured in conformity with the annex I of 93/42/CEE Medical Device, under the harmonized rules here below described: 1993/42/EEC Medical Devices Directive, norme: EN 60204-1:2010, **EN ISO 14971:2009**.

The device is compliant to the EN ISO 16442, controlled environment storage cabinet for disinfected thermolabile endoscopes

Cabinet/instrument connection

ED 200 cassettes configuration:

After the automatic reprocessing, the flexible endoscope is placed into a plastic cassette.

Inside the cassette, the connection system to the endoscope channels is made by silicon pipes with connectors dedicated to auxiliary, biotic, air and water channels.

The connection among the instruments and the internal cassette connectors can be easily managed before loading the cassettes inside the cabinet.

The cassette is equipped with a dedicated fast connection to the medical compressed air source of the drying cabinet. The cassette loading is guided by rails assuring a correct alignment between the cassette/cabinet connections.

The cassette has holes allowing air flow for the drying of the instrument external surface.

ED 200 net baskets configuration:

In this configuration, the cabinet is equipped with stainless steel sloping trays for reprocessed instruments water dripping and stainless steel net baskets for the housing of the instruments.

The connection system to the endoscope channels is made by silicon pipes with connectors dedicated to auxiliary, biotic, air and water channels. The net baskets are laid on the trays and, while loading the trays into the cabinet, the operator connects the cabinet medical compressed air source.

The cabinet has a fast CPC normally closed connectors.

The stainless steel net baskets allow free air flow for the instrument external surface drying. They're also interchangeable with the baskets used in the EW 2 cart washer C559.

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Construction

- External frame and panels in stainless steel AISI 304
- Chamber thermal isolation by a mineral wool panels coating 50mm thick
- Drying chamber coating in polish stainless steel AISI 304
- HST temperate glass hinged door reversible and configurable for right or left opening
- Cassettes or trays guides in stainless steel AISI 304
- Endoscopes storage cassette in white ABS adapts to foodstuffs with status indicator to highlight the instrument dirty/clean condition

  Or
- Endoscopes cassette in transparent methacrylate to allows the instrument visual inspection.

  (cassettes performances in terms of duration depend on the physical characteristics of the production material).
- Trays and net baskets in stainless steel AISI 304
- Drying circuit dedicated to a homogeneous heat distribution inside the storage chamber served by a blower (this homogeneous heat distribution previews possible high temperature areas, a potential risk for the stored instruments). The circuit is monitored by a pressure switch.
- Air drying heating elements power 1500W.
- High pressure air drying circuit for the instruments channels served by an “oil free” compressor– air pressure 0,5 bar
- The filtration system composed by F5 class pre-filter and HEPA H14 filter serves both drying circuits.
- Easy filters maintenance with access from the frontal superior lifting panel equipped with gas pistons.
- Independent flowmeters dedicated to each single connection for endoscopes internal channels flow monitoring.
- Open door sensors.
- PLC controlled door locking

Control system and connection interface

- Machine PLC control system with 5,7" color touch screen display
- Instruments database (up to 200)
- Operators database (up to 99)
- Events memorization (up to 4000 cycles)
- Integrated printer
- Ethernet connection for the Hospital network connection through the SteelcoData supervisor software and the events real time remote monitoring from a PC. This software allows the monitoring of several units, both ED 200 drying cabinets and EW 2 automated reprocessors.

Control software functioning

- The first software activity is the data entry of the operators and the instrument serial numbers. Then, for each endoscope, the identification of the drying phase duration parameter.
- After the database population, to load an instrument, the operator must identify himself typing a password and has to identify the instrument. Otherwise, the same operations can be completed more easily by using a barcode reader.
- Following one of these procedures, the control panel allows the door to be open and closed and checks the channel drying flow for the selected position.
- The display shows simultaneously, the stored instruments “status” for each of the 8 available levels. The status is easily identified through color codes:
  - Blue – drying phase
  - Green – storage phase
  - Yellow – pre-alarm.
    The storage timing will expire soon.
  - Red – alarm.
    The storage limit time is already expired. The instruments need to be reprocessed.

  Phases duration can be custom defined

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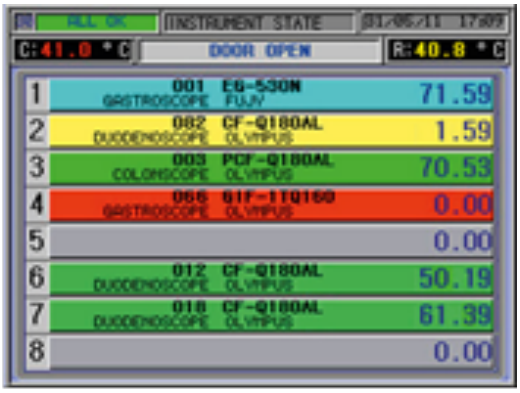

- The display indicates also, for how long the instrument has been stored in terms of hours count-down related to the maximum storage time allowed.
- Once the instrument is collected (upon operators and instruments identification) the drying/storage cycle is finished.

Device settings, safety features

- Drying chamber temperature set (from room temperature at +40°C)
- Visual and acoustic alarm (excludible) for minimum/maximum temperature.
- Visual and acoustic alarm (excludible) for drying circuit flow incorrect operation (the alarm is kept until the flow is restored and within parameters).
- Visual and acoustic alarm (excludible) for incorrect cassette/instrument connection and for incorrect cabinet/cassettes coupling or alignment.
- Visual and acoustic advise for HEPA filter maintenance.
- Visual and acoustic alarm if one of the doors door remains open longer than a pre-set timing (configurable parameter).
- All acoustic alarms can be disabled through a general parameter.
- In the pass-through version the door is interlocked to avoid the simultaneous door opening.

Traceability system

The traceability is performed by integrated printer Steelco ST3 and/or registered data stored in the cabinet internal memory (all the events succeeded from the instrument identification till its taking).

The print ticket shows the information regarding: operator, machine software release, machine model and serial number, instrument storage id, instrument information, operators involved in instrument deposit and taking, deposit and taking date and time, drying and flow performed parameters, average storage temperature, storage level in the cabinet… For every instrument these data are stored in the cabinet memory to trace up to 4000 complete instrument events.

All the above information are also available directly from the touch screen control panel.

Standard Configuration

- Connection set for different endoscopes brands and models
- Integrated printer Steelco ST3

Optionals

- Barcode reader instrument/operator identification
- RFID system for instrument/operator identification
- Indirect UV air treatment
- Cabinet configured with 8 stainless steel net baskets with lower tray for water dripping

Connections

Electrical requirements

- **Total power**
  - 2 KW single storage units
  - 4 KW double storage units
- 230V/~/50Hz
- 110V/~/60Hz

other electrical connections are available to match electrical requirements of the installation site

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