Flexible endoscope automated reprocessing system
Safe, efficient and user friendly solutions
for reprocessing flexible endoscopes in busy departments

"For the Environmentally conscious"
Steelco is a leading infection control solution provider, supplying the healthcare, laboratory research and pharma sectors. Active in over 90 countries, Steelco has equipped numerous world renowned hospitals and counts among its customers household names in the laboratory, pharmaceutical, and industrial sectors.

Steelco devices are classified CE Medical Device (Community rule 93/42/CEE) code nr. 0051.

Steelco Endoscope Washers are designed and constructed to comply with the latest European Standard EN ISO 15883-4, drying cabinets are in compliance with EN 16442.
The new standard for maximum safety in endoscope reprocessing

Working in close collaboration with leading endoscope reprocessing centres, Steelco developed the ARES system to best meet the current and future needs of clinicians.

**Workflow**
To maximize efficiency whilst decreasing the risk of cross contamination

**Fast processes**
To minimize the time between endoscope use, cleaning and storage

**Fully compliant with the standards**
Designed to comply with latest standards and traceability functionality

**Ergonomic and user friendly**
Created around operators to assist them in their daily work routines

**Traceability**
Different levels of traceability systems available according to user requirements
Complete solutions

The first step to provide the right solution is understanding individual customer needs and offering the best solution based on current and future workflow and workloads.

EPW 100
Automated system to assist manual cleaning

EW series
Automated endoscope reprocessors for different size departments

ED series
Aseptic vertical and horizontal endoscope storage
OCS, One-time Connection System
for all processing and storage

- reduced contamination risk
- one-time channel connection
- one-time endoscope handling
- error proof connection
- three-times faster connection
- unique identification ocs/instrument
- easy and ergonomic

the appliances showing this logo are equipped with OCS one-time connection system, fitting prewashing, washing/disinfection and drying/storage devices
EPW 100

EPW assists operators during manual cleaning phase by leak testing endoscopes, flushing and rinsing channels, eliminating the risk of stress induced injuries and providing a permanent record of the process that can be printed, transferred to a USB stick or integrated into SteelcoData.

- Leak testing
- Elimination of repetitive strain injury risk of flushing and rinsing with a syringe
- Identification of operator and endoscope using barcode
- Traceability of critical parameters of manual cleaning process
- Organic residue testing facility
- Automatic dosing of correct detergent
- Controlled correct pressure and volume during flushing and rinsing phases
- Residual detergent risk eliminated through automated flushing

Intuitive and simple to use
- Automated user prompts with operator and scope recognition
- Step by step user guide
**EPW 100**

- Built in printer for cycle traceability
- USB connection
- Channels connections for instrument flushing
- Detergent dosing connection
- Detergent inlet connection
- Leakage test connection

**EPW 100 S**

- Built in printer for cycle traceability
- USB connection
- One-time Connection System
  - Shared between pre-washing, washing/disinfection and drying/storage devices
- Instrument and operator identification through bar code reader. Friendly HMI.
- Water and chemical channel flushing
- Additional channel
- Detergent dosing connection
- Detergent inlet connection

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**Sinks and furniture for manual cleaning**

Different sized sinks and furniture specifically designed to assist manual cleaning are available.

- **99911264 Manual**
  - LxDxH: 2000x700x985 mm
  - Sink LxW: 1850x250 mm

- **99912083 Automatic**
  - LxDxH: 1200x700x985 mm

- **99912015 Automatic**
  - LxDxH: 1050x300 mm

- **99911265 Manual**
  - LxDxH: 1200x700x985 mm

- **99911266 Manual**
  - LxDxH: 500x700x985 mm

**Sink cabinet with automatic filling and draining**

Suitable for both versions of automated systems to support manual cleaning, EPW 100 and EPW 100 S.
Steelco AERs have been designed to fully comply with ISO 15883 standard regarding low temperature washing and high level disinfection of flexible endoscopes.

**Individual channel monitoring** for pressure and flow according to individual scope parameters to achieve correct cleaning and disinfection.

Available in single or pass through double door versions for the rapid reprocessing in under 30 minutes of either 2 or 3 flexible endoscopes or up to 9 bronchoscopes.

Ergonomic instrument connectivity and integrated transport solutions simplify operator handling.

Low water and chemical consumption with a small footprint, yet with easy operator and service access, means lowest possible operating costs and best capacity to space ratio.

Dual stage water filtration system down to 0.1 microns for endotoxin removal and disinfection of all water protects against contamination. Filters are decontaminated during the self disinfection program of the machine, thereby enhancing filter life expectancy.
Capacity - 2 scopes
Dedicated wash carts for 2 flexible endoscopes or 4 video bronchoscopes or 8 fiberscopes/cystoscopes

Easy loading
Slide and rotate design for easy connection of channels even in tight workspaces

Loading on transport trolley

Endoscope sleeve holder
To maximize contact between external endoscope surface and chemistries

Capacity - 2 or 3 scopes
Universal wash carts for 2 or 3 flexible endoscopes, 6 or 9 videobronchoscopes, fiberscopes or cystoscopes

Workflow optimization
Dedicated mesh trays are compatible with Steelco ED series of drying cabinets

Easy Loading
Sliding drawers allows easy single handed connection

Channel connectivity
Manual with OCS, one-time connection system

Chemistries
The independently validated results achieved by the ARES flexible endoscope reprocessor range are strictly linked to the use of Steelco chemistries, which provide cost effective rapid cycles. Using non-validated chemistries contravenes standards, can compromise cycle efficacy, decontamination, and may cause damage to both equipment and endoscopes.
Accessories for EW 2, EW 2 S series

**Safe Case**

Safe Case enables reprocessing in accordance with ISO 15883 standards of TEE probes. The electronic control unit and connection cable are protected in a hermetically sealed case, whilst the distal tube that requires washing and high level non-thermal disinfection is exposed.

**EW 2 - Washing carts**

- **C1621** Insert for 12 rigid endoscopes without internal channels measuring 400 mm length max.
- **C691** stainless steel tray compatible with AER, transport cart and drying cabinet
- **C565** insert to avoid endoscopic instrument overlapping contact points

- **C568** Wash cart suitable for transport cassettes.
- **C279** Transport trolley.
- **C568** Wash cart suitable for transport cassettes.
- **C572** Wash cart suitable for SAFE CASE for transesophageal probes.

- **C558** Rotating wash cart for ergonomic loading of 2 flexible endoscopes even in restricted areas.
- **C559** Wash cart with removable mesh trays for 2 flexible endoscopes.
- **C563** Wash cart for up to 20 rigid scopes with luer lock connections.

- **C560** Wash cart for the simultaneous treatment of: 4 videobronchoscopes/cystoscopes or 8 fiberscopes/cystoscopes with separate control.
### Technical data

<table>
<thead>
<tr>
<th>AERs</th>
<th>EW 2</th>
<th>EW 2 2S</th>
<th>EW 2 3S</th>
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</thead>
<tbody>
<tr>
<td><strong>Compliance with standards</strong></td>
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<tr>
<td>EN ISO 15883-4</td>
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<td>European machine directive 2006/42/EC and medical device directive 93/42/EEC</td>
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<tr>
<td>Independent testing of high level disinfection claims</td>
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<tr>
<td><strong>Instrument connectivity</strong></td>
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<tr>
<td>Number of flexible endoscopes</td>
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<td>3</td>
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<tr>
<td>Number of video bronchoscopes</td>
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<td>4</td>
<td>6</td>
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<td>Number of fiberscopes cystoscopes</td>
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<td>9</td>
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<td>Number of channels including leak test</td>
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<td>8x2</td>
<td>8x3</td>
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<td>Automated endoscope recognition and historic data monitoring</td>
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<tr>
<td><strong>High level disinfection system</strong></td>
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<tr>
<td>Individual channel monitoring for pressure and flow</td>
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<tr>
<td>Compatible with peracetic acid or glutaraldehyde</td>
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<td>Number of washing spray arms</td>
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<td>External scope drying system</td>
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<td><strong>Door configuration options</strong></td>
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<td>Automatic vertical sliding single or pass through double door</td>
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<td><strong>Control system and traceability</strong></td>
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<tr>
<td>Touch screen 5.7” graphic LCD display</td>
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<tr>
<td>Barcode for user, scope and parameter recognition</td>
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<tr>
<td>RFID for user, scope and parameter recognition</td>
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<td>Ethernet port</td>
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<td>SteelcoData software for paperless traceability and on line equipment monitoring</td>
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<td>•</td>
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<tr>
<td>SteelcoData ARES software for paperless total process traceability - on line equipment monitoring</td>
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<tr>
<td><strong>Utilities</strong></td>
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<td>Standard electrical connection others available on request</td>
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<td>400V 3–N 50/60 Hz</td>
<td>400V 3–N 50/60 Hz</td>
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<td>Total power W</td>
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<td>6050</td>
<td>6050</td>
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<td>Power pack recommended for glutaraldehyde cycle</td>
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<td>Cold, warm and demineralized water connections with filtering up to 0.1 μm</td>
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<td>•</td>
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<tr>
<td>Compressed air (medical grade)</td>
<td>•</td>
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</tbody>
</table>

* = Standard  • = Optional  - = Not available
Endoscope drying and storage cabinets

Both vertical hanging and horizontal basket or container storage options available in single or double door pass through versions with left or right hand door swings.

- Independently validated to retain microbiology integrity **up to 720 hours**
- Compatible with all brands of endoscopes
- Storing of up to 18 endoscopes vertically and 16 horizontally
- Warm sterile Hepa filtered air with indirect UV treatment for optimal drying of the outside of endoscopes and connection to internal channels
- From printer option for hard copies to full traceability options with Steelco Data
High capacity models up to 8 or 16 endoscope connections

Horizontal storage with stainless steel trays or plastic containers

Channel connectivity
- automatic with plastic cassettes
- manual with stainless steel trays and universal connector

High capacity models up to 8 or 16 endoscope connections

Horizontal storage with stainless steel trays

Channel connectivity:
- manual with stainless steel trays and OCS (one-time connection system, shared between prewashing, washing/disinfection and drying/storage devices)
Optimal conditions for storage

Following effective cleaning and decontamination in an automated endoscope processor, maintaining the microbiological integrity of endoscopes during storage is fundamental in reducing cross infection risks. Steelco ensures this in a number of ways.

ED 250 series

- High capacity models for up to 9 or 18 endoscopes connection
- Easy to use connector for all major endoscope brands
- Sliding holder design for easy access from either side of cabinet in a compact footprint
- Guides to ensure correct hanging, avoid damage and provide correct airflow around and through endoscopes

720 hours of aseptic storage

Steelco’s ED series has been independently validated by European certified laboratories for maintaining aseptic integrity up to 720 hours providing you with greater flexibility in the storage of your endoscopes.

Sterile air filtering

The ED range is fitted with HEPA H 14 filters for maximum safety. Access for changing the filters is easy through the front panel of the dryers.

- Built in medical grade air compressor or connection to external compressed air source depending on model configuration
- Flow rates monitored in individual scopes
UV light treatment
Indirect UV light treatment is used for air treatment to minimize the risk of cross contamination.

Traceability
Manual, barcode or RFID tag input for operator and scope identification.

Control software
Software monitors the performance of the drying cabinet with colour coded status alerts and individual cycle data for each instrument for all machine parameters. Instrument identification is possible using barcode reader or RFID reader.

Individual scope status monitoring
- Drying
- Available for use
- Storage time pre expiry alarm
- Storage time limit expired
Drying and storage cabinet dimensions

<table>
<thead>
<tr>
<th></th>
<th>ED 200</th>
<th>ED 200 S</th>
<th>ED 250</th>
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</thead>
<tbody>
<tr>
<td><strong>W</strong> (mm)</td>
<td>968</td>
<td>968</td>
<td>1705</td>
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<tr>
<td><strong>D</strong> (mm)</td>
<td>787</td>
<td>840</td>
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<tr>
<td><strong>H</strong> (mm)</td>
<td>1905</td>
<td>1905</td>
<td>2270</td>
</tr>
<tr>
<td><strong>W</strong> (inches)</td>
<td>38¼&quot;</td>
<td>38¼&quot;</td>
<td>67½&quot;</td>
</tr>
<tr>
<td><strong>D</strong> (inches)</td>
<td>31&quot;</td>
<td>31&quot;</td>
<td>31&quot;</td>
</tr>
<tr>
<td><strong>H</strong> (inches)</td>
<td>75&quot;</td>
<td>75&quot;</td>
<td>75&quot;</td>
</tr>
</tbody>
</table>

**Compliance with standards**
- EN 16442 controlled environment storage cabinet for disinfected thermolabile endoscopes
- Independent testing of aseptic storage claims

**Instrument connectivity**
- Number of flexible endoscopes independently monitored flow rate: 8 or 16
- Compatibility with EW S series endoscope washer connecting system
- Automated endoscope recognition and historic data monitoring
- UV light air disinfection

**Door configuration options**
- Storage type: horizontal, horizontal, vertical
- Front access for service and filter and UV change

**Control system and traceability**
- Touch screen 5.7" graphic LCD display
- Barcode or RFID use, scope recognition
- Integrated printer
- Ethernet port
- SteelcoData software for paperless traceability and on-line equipment monitoring
- SteelcoData ARES software for paperless total process traceability and on-line equipment monitoring

**Utilities**
- Standard electrical connection, others available on request
- Total power W (per module): 2000, 2000, 2000

- = Standard  ◊ = Optional  - = Not available
Complete workflow solutions

Steelco offers complete workflow solutions for different department sizes and layouts, to maximize efficiency and safety.
C256/C256D stainless steel transport cart

For the transport of up to 4 endoscope containers or up to 6 stainless steel trays. Storage of white and red endoscope bags, together with red or green tamper proof seals for a quick colour code identification of clean and dirty scopes. Top can be used as work surface. A version with frontal door is also available (C256D). Compatible with ED 200 drying cabinet.

T361/T362: Short term transportation system

To improve and maximise safety, thus reducing cross contamination risk while moving the endoscope across GI Labs dirty and clean paths. The trolleys can be equipped with either 4 (T361) or 6 (T362) cassettes, together with red or green tamper proof seals for a quick colour code identification of clean and dirty scopes. Compatible with OCS one-time connection system.

- **C256/C256D** Stainless steel transport cart
- **T361/T362** Short term transportation system
- **9992183** Transparent cassette for the perfect housing of C961 and the endoscope to avoid cross contamination. Compatible with T361/T362 short term transportation system
- **9991504** Storage cassette compatible with C256/C256D transport cart and ED 200 drying cabinet
- **99912046** Red/ 99912047 green tamper proof seals (250 pcs) for an easy colour code identification of dirty (red) or clean (green) endoscopes inside the cassette 9992183 and 9991504
- **ED100030** Soiled (red) endoscope transport bag
- **ED100031** Clean (white) endoscope transport bag
- **99912046** Red/ 99912047 green tamper proof seals (250 pcs) for an easy colour code identification of dirty (red) or clean (green) endoscopes inside the cassette 9992183 and 9991504
C256/C256D: way from dirty to clean area

1. Put the red bag (ED100030) in an empty container (9991504)
2. Put the endoscope in the container
3. Close the red bag with the handles
4. Close the lid. Seal the lid with the red tamper proof seals (99912046)

T361/T362: way from dirty to clean area

1. Prepare an empty container (9992183)
2. Put the C961 stainless steel tray with the endoscope in the container
3. Close the lid. Seal the lid with the red tamper proof seals (99912046)
4. Put the white bag (ED100031) in an empty container (9991504)
5. Prepare an empty container (9992183)
6. Put the C961 stainless steel tray with the endoscope in the container
7. Close the lid. Seal the lid with the green tamper proof seals (99912047)
Process Traceability

Level 1
Paper cycle record keeping

Level 2
SteelcoData
• Electronic cycle record keeping

Level 3
SteelcoData ARES
• Electronic cycle record keeping
• Full traceability system

Legend:
- Storage
- Reprocessor
- Inspection
- Off site use
- Reprocessor
- Manual cleaning
- Technical service
- Information communication and process control
- Stop
- Warning
- Elapsed time
- Total digital monitoring of all cycle phases
- Network
- Internal messages
- Digital communication
- Process flow
- Print flow
- Archiving
Steelco equipment can be configured to provide data to the level required by customers for monitoring the reprocessing of flexible endoscopes.

**Key functions:**

- Printed cycle verification
- Remote online equipment monitoring

**Traceability information**

Records of manual cleaning:
- Instrument recognition
- Operator
- Patient
- Clinician

Manual cleaning:
- Instrument
- Operator
- Leak testing

Automated reprocessing:
- Endoscope recognition
- Correct connection
- Pressure leak
- Cycle monitoring
- Pressure monitoring
- Flow monitoring
- User alert to parameter deviations

Drying and storage:
- Endoscope recognition
- Scope start and end storage data
- Any parameter deviations

**Time between different phases**

- Offsite service of instrument

SteelData ARES gives you full traceability of flexible endoscope reprocessing.
Process control, Steelcosure
Independent performance verification of your equipment and processes

Liquid hydrogen peroxide chemical indicator
The hydrogen peroxide indicator is designed to monitor the process efficacy of Steelco endoscope reprocessors using SteelcoXide liquid hydrogen peroxide in high level disinfection and sterilization cycles. Steelco offers the choice of liquid hydrogen peroxide high level disinfection and sterilization cycles in their EW range of endoscope reprocessors.

Protein detection test
The SteelcoSure Protein Detection Test is a simple test, detecting residual proteins on surgical instrument and potentially contaminated surfaces by means of a color change in the test solution.

Long Lumen Protein test
The SteelcoSure Protein test is sensitive to 1μg of protein and designed to detect residual proteins on inside channels of rigid and flexible endoscopes and other potentially contaminated lumen instruments by means of a color change in the test solution within 10 seconds at room temperature without requiring incubation. The test utilizes 2.5 meter long and 2.8 mm diameter swab.

Steelco’s Q-Water BSK
Professional water sampling kit for bacterial check, provides a ready, easy to use assembled sterile kit to enable water samples to be taken in a controlled environment to minimise the risk of accidental sample contamination.
Safe and user friendly solutions for clinics

A catalog showing all is needed to properly fit out a small endoscopy facility: EPW 100 prewash, EW1 reprocessor in all its configurations and ED100-150 storage.
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