AT-OS
DISINFECTION TECHNOLOGY

Your Health, our Technology

ENDO 3
DCA | DCI

Drying and storage cabinets

www.at-os.com

ENDO 3 for ventilation and storage of endoscopes in complete safety.

DC70 cabinets for drying, surgical instruments and anesthesia breathing circuits safely and flawlessly.

Thanks to the use of the highest technology, these cabinets have been developed to offer different models, suitable for the enormous variety of instruments found in hospital wards, operating theatres and sterilisation facilities, satisfying every type of medical requirement.

The large choice of baskets, inserts and shelves allows the user to dry and ventilate the most sophisticated instruments, such as tubular instruments.

This line offers high reliability, benefiting operators!

ENDO 3 cabinets comply with the EN 16442 Standard.

Excellent results

Color graphic display

Energy saving

Partial recycling of air

Controlled warm air

Drying programmes and ventilation innovative

High reliability

ENDO 3 CABINETS

Line of cabinets for ventilation and storage of endoscopes

The **ENDO 3** line allows endoscopes to be ventilated with hot air, keeping them ready for use, protected and uncontaminated by external agents.

ENDO 3 line
Ventilated cabinet for endoscopes

Stainless steel design

ENDO 3s machines are completely made of AISI 304 (DIN 1.4301) stainless steel with a Scotch Brite brushed finish that facilitates cleaning operations. The door has a stainless steel frame, tempered glass doors, and a silicone perimeter gasket that provides a perfect seal and a good barrier against dirt and dust, which is also ensured by an overpressure inside the chamber.

Touch-pad keyboard with graphic display

A colour touch screen monitor is installed on the side panel of the ENDO 3, which shows the status of the cabinet as well as being used to manage all parameters.

Alarm-check system

This system helps to understand why an alarm has occurred before consulting the user manual. A text appears on the display with the number, the image of the alarm and the text explaining the possible causes of it.

Door locking and security system

Locking system capable of locking the door and allowing it to be opened only by authorized operators via password. In addition there is a lock with a key.

Sliding vertical panels

ENDO 3 is equipped with 3 vertical, removable, AISI 304 stainless steel panels, each equipped with 2 hooks on each side. For each panel, up to 4 endoscopes (Pentax, Fuji, Olympus etc.) can be stored via universal holders and hooks, for a total of 12 endoscopes per cabinet. The panels are equipped with removable drip trays and allow for easy insertion as well as secure attachment of the endoscopes in the provided slots to prevent any damage. The upright position also allows the internal drying of the channels to be maintained.

Ventilation with HEPA H14 filter

Ventilation of the endoscopes is via a three-way quick connector connected to the ducts. Ambient air is drawn in and filtered through a HEPA H14 filter, and then heated to the desired temperature (not exceeding 40°C / 104°F). The HEPA H14 filter can block fine particulate matter in the air with an efficiency of 99.995%. In addition, in order not to damage or clog the filter, a prefilter is placed in front of it to block larger dust.

Pressure monitoring

The free passage of air inside the endoscope channels is constantly monitored by a pressure switch that monitors pressure and allows for improved operation and safety.

Printer

ENDO 3s are equipped with a built-in thermal printer that prints a receipt each time an endoscope is picked up. The receipt shows the information: user, type of endoscope, day and time of loading and withdrawal, remaining hours of storage, status of the endoscope, and any other related events.

PLC system

The PLC system guarantees total traceability, storing every detail of the storage system. The system records the name of the operators using a particular endoscope, the date and time of storage and collection of the endoscope and much more. It also constantly monitors how long each endoscope is stored in the cabinet, alerting the user with an alarm when the set interval expires.

LED light inside cabinets

At the top of the cabinet, two low-energy LED lights are installed to improve visibility during loading and unloading endoscopes.

Ventilation endoscope ducts

For ventilation the endoscope ducts, connector kits are required (one per endoscope) consisting of silicon tubing and connectors suitable for the type of instrument used OLYMPUS, FUJI, PENTAX etc. The KIT is supplied on request by communicating the model and version of the instruments supplied.

Connection RS232 port

The cabinet is equipped with an RS232 port for external connections, such as a thermal printer.

Connection ETHERNET port

ETHERNET port to connect to the PLC during extraordinary maintenance and/or to use the traceability system.

Barcode reader

The cabinets are integrated with a barcode reader to identify the user operating the cabinet and the types and quantity of endoscopes being inserted and removed.

USB port

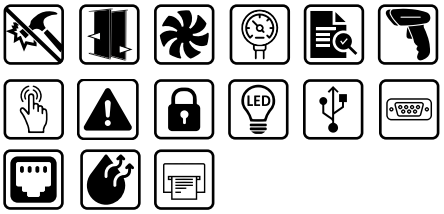
The cabinet is equipped with a USB port that allows a digital copy of the receipts, which are printed each time an endoscope is removed from the cabinet, to be saved on an external USB memory.

STOP CROSS CONTAMINATION!

“Thanks to a system of 12 mini air compressors separated and dedicated connector kits, ***ENDO 3*** *cabinets avoid cross-contamination, thus increasing* ***safety*** *and* ***hygiene levels****.”*

ENDO 3

The front door is made of tempered glass for easy visual inspection of the instruments inside the cabinet.
The internal chamber is equipped with double-walled perimeter panels, internally soundproofed with special soundproofing material.
The instruments are stored on 3 removable vertical panels made of AISI 304 stainless steel, each equipped with 2 hooks per side (for a total of 4 endoscopes stored per panel).
The panels with total extraction allow for easy insertion as well as secure fastening in the slots provided to prevent damage to the instruments themselves.
Thanks to filtered air circulation with a HEPA H14 filter, the items are protected from dust and stored in a controlled environment.



Kit connectors

Barcode reader

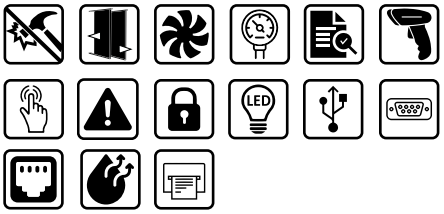
Printer integrated

Filter Hepa H14

The ENDO 3 ventilation system has been tested in an accredited external laboratory according to EN 16442:2015.
Storage cabinet with controlled environment for up to 192 hours.

ENDO 3D

The ENDO 3D version provides a stainless steel through-door interlocked completely in tempered glass, for easy visual inspection of the instruments inside the cabinet. The through-door facilitates the loading and unloading of endoscopes and is suitable for installations where the dirty room is separated from the clean room, to avoid any risk of contamination and speed up the work process.



+ PRACTICE
- RISK

Kit
connectors

Barcode
reader

Printer
integrated

Filter
Hepa H14

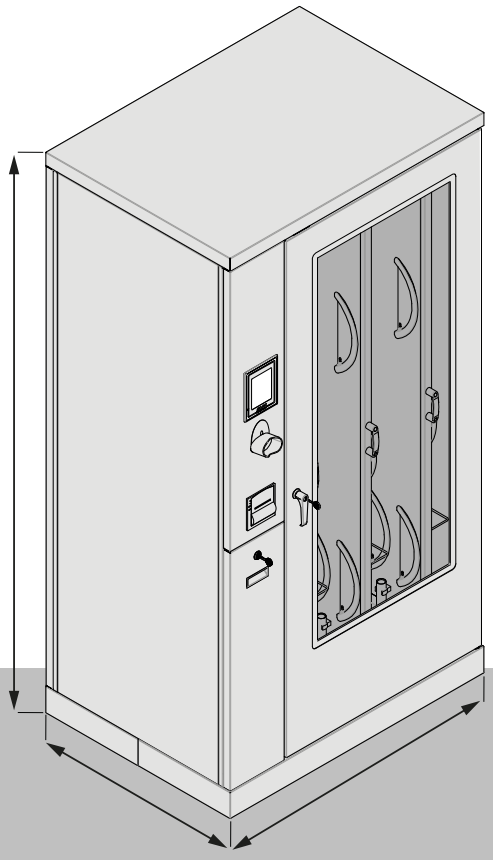
Technical features

	ENDO 3	ENDO 3D
Model code	18008544	18008545
Internal dimensions (WxDxH)	785x742x1883 mm (30.9”x29.2”x74.1”)	785x742x1883 mm (30.9”x29.2”x74.1”)
Indicative weight	350 Kg (772 lbs)	350 Kg (772 lbs)
Average air flow rate into cabinet	150 m³/h	150 m³/h
Internal pressure	101325 Pa	101325 Pa
Thermal dispersion (Maximum)	358947,37 J/h (341 BTU/h)	358947,37 J/h (341 BTU/h)
Internal volume	1096 l (290 Gal)	1096 l (290 Gal)
Communication ports	USB per PC e FLASH DRIVE; Porta ETHERNET; Porta RS232.	USB per PC e FLASH DRIVE; Porta ETHERNET; Porta RS232.
Noisiness	<50 (dBA)	<50 (dBA)
Connection accessory kit	●	●
1x Touch control panel	✓	✓
2x Touch control panels	×	✓
Manual interlocked front door	✓	✓
Manual interlocked rear door	×	✓
Forced-air ventilation	✓	✓
HEPA H14 filter	✓	✓
Print	✓	✓
Front barcode reader	✓	✓
Rear barcode reader	×	✓

✓ Standard
● On request
× Not available

External dimensions

ENDO 3 | ENDO 3D
WxDxH: 1100x800x2100 mm
(43.3”x31.5”x82.7”)



The reference values are based on standard model.

DC70 CABINETS

For drying of surgical instruments and respiratory circuits for anaesthesia

AT-OS makes two types of drying cabinets that differ according to the internal accessories that can be inserted:

- **DCA-70** allows rapid drying of anaesthesia breathing circuits and, in its combined version, drying of surgical instruments.
- **DCI-70** enables rapid drying of surgical instruments.

DC70 cabinets offer excellent drying performance, protecting instruments from dust and speeding up work, thus meeting the different needs of operators.

DC70 line
Drying cabinets

DCA-70

DCA-70
COMBINED VERSION

DCI-70

Stainless steel design

DC70s are used for drying surgical instruments and/or respiratory circuits for anaesthesia with controlled hot air. The cabinets are made of AISI 304 stainless steel (DIN 1.4301), with sound-absorbing and fireproof material, and a front panel of double tempered glass.

Security system of door locking

A sensor on the door allows the cabinet to be opened at any time, to pause or reset the current cycle.

Touch-pad keyboard with graphic display

Touch-screen control panel with colour LCD graphic display allowing the setting of drying parameters, such as temperature and time, according to the articles to be treated with acoustic warning in case of alarm and/or end of treatment.

Alarm-check system

This system helps to understand why an alarm has occurred, before consulting the user manual. A screen appears on the display with the number and image of the alarm, as well as text explaining the possible causes.

Setting temperature and time

Temperature and time can be set at each programme start for up to 120'. For tubes and anaesthesia balloons a programme with a temperature of 7Q0°C (158°F) is recommended, for surgical instruments a temperature of up to 90°C (194°F) is reached inside. Once the drying programme is finished, it is recommended to leave the items inside the cabinet for another 15' so that they cool down.

Ventilation and partial air recirculation with HEPA filter H14

The cabinet filters the air through 2 HEPA H14 filters. The first filter sucks in and filters air from outside the cabinet (ambient air), while the second filter sucks in air from inside the cabinet (recycle air). This allows considerable energy savings (approx. 50 %) and reduces heating times. In addition, there is an automatic alarm that signals a lack of pressure in the circuit and warns when the filters need to be changed.

DCA-70 | DCA-70D

The DCA-70 is a rapid hot-air controlled drying cabinet for anaesthesia breathing circuits. By adding internal shelves for drying surgical instruments, the DCA-70 can be converted into a combined solution for simultaneous drying of surgical instruments and anaesthesia breathing circuits. Thanks to the technologies employed and the HEPA H14 filters, these cabinets are the ideal solution to speed up and reduce drying times and store instruments safely.
A DCA-70D version with through-door is also available to further optimise work.

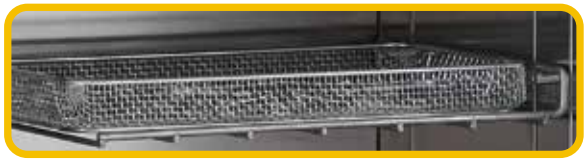
Anaesthesia tube holders

Balloons for anaesthesia

The cabinet has a capacity to accommodate **6 anaesthesia cassettes** of 6 positions each, for a total of **36 positions** between tubes and balloons.
In the combined version, the cabinet can accommodate up to **12 positions** between tubes and ballons and accommodate **6 DIN baskets**.

+ SPACE
+ INSTRUMENTS

IS-70



IC-70

The DCA-70 is equipped with 5 shelves (IS-70 and IC-70) for a combined solution that also allows the drying of surgical instruments.

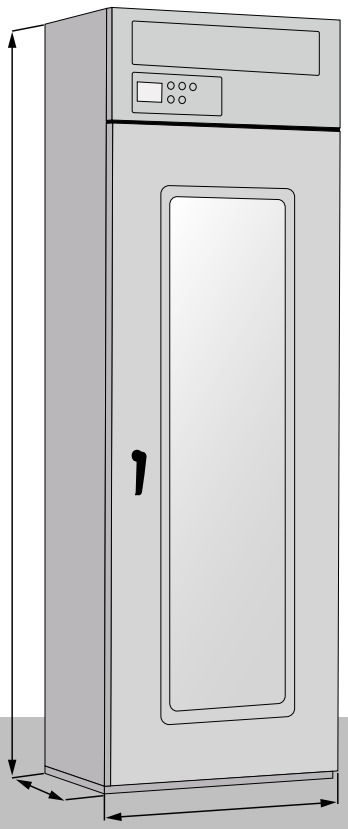
Technical features

	DCA-70	DCA-70D
Model code	18009118	18008302
Internal dimensions (WxDxH)	600x415x1430 mm (23.6”x16.3”x56.3”)	600x415x1430 mm (23.6”x16.3”x56.3”)
Indicative weight	180 Kg (397 lbs)	180 Kg (397 lbs)
Average air flow rate into cabinet	100 m³/h	100 m³/h
Internal pressure	725 Pa	725 Pa
Thermal dispersion (Maximum)	358947,37 J/h (341 BTU/h)	358947,37 J/h (341 BTU/h)
Internal volume	365 l (96.4 Gal)	365 l (96.4 Gal)
Communication ports	USB per PC	USB per PC
Noisiness	<60 (dBA)	<60 (dBA)
1x Touch control panel	✓	✓
Manual interlocked front door	✓	✓
Manual interlocked rear door	×	✓
Forced-air ventilation	✓	✓
HEPA H14 filter	✓	✓

✓ Standard
● On request
× Not available

External dimensions

DCA-70DCA-70D
WxDxH: 700x480x1900 mm
(27.6”x18.9”x74.8”)



The reference values are based on standard model.

DCI-70 - DCI-70D

The DCI-70 is a controlled hot-air rapid drying cabinet for surgical instruments.
Equipped with 10 shelves, it has a capacity of up to 10 DIN 1/1 baskets.
The shelves are completely removable to allow more height for the instruments to be dried.
A DCI-70D version with through-door is also available to further optimise work.

HIGH CAPACITY OF **DRYING**

Thanks to the possibility of increased interior space, the cabinet guarantees an increase in the amount of tools to be dried and stored, thus speeding up the workload.

Instruments perfectly dry in all their parts!

- **10 removable shelves**
- **10 DIN 1/1 baskets with the possibility of increasing the height by removing shelves.**

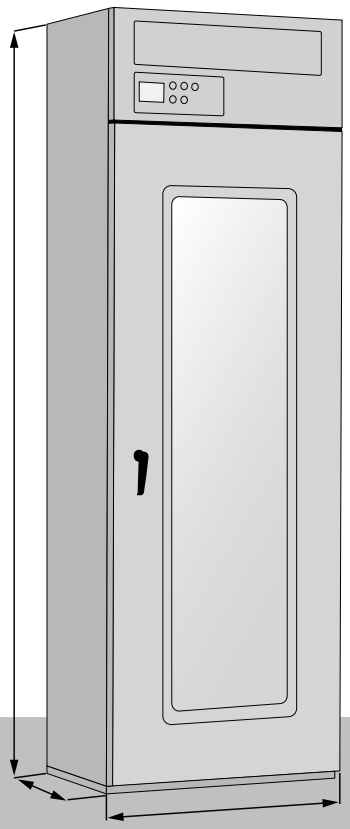
Technical features

	DCI-70	DCI-70D
Model code	18009119	18008541
Internal dimensions (WxDxH)	600x415x1430 mm (23.6”x16.3”x56.3”)	600x415x1430 mm (23.6”x16.3”x56.3”)
Indicative weight	180 Kg (397 lbs)	180 Kg (397 lbs)
Average air flow rate into cabinet	100 m³/h	100 m³/h
Internal pressure	725 Pa	725 Pa
Thermal dispersion (Maximum)	358947,37 J/h (341 BTU/h)	358947,37 J/h (341 BTU/h)
Internal volume	365 l (96.4 Gal)	365 l (96.4 Gal)
Communication ports	USB per PC	USB per PC
Noisiness	<60 (dBA)	<60 (dBA)
1x Touch control panel	✓	✓
Manual interlocked front door	✓	✓
Manual interlocked rear door	✗	✓
Forced-air ventilation	✓	✓
HEPA H14 filter	✓	✓

✓ Standard
● On request
✗ Not available

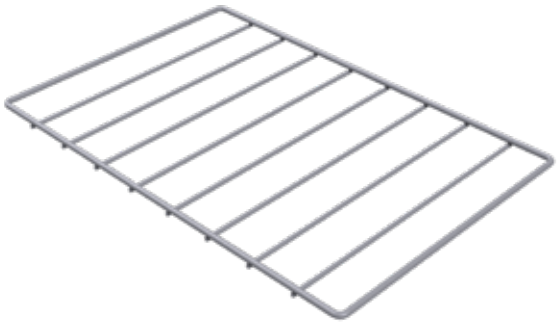
External dimensions

DCI-70 | DCI-70D
WxDxH: 700x480x1900 mm
(27.6”x18.9”x74.8”)



The reference values are based on standard model.

DC-70 Inserts and shelves

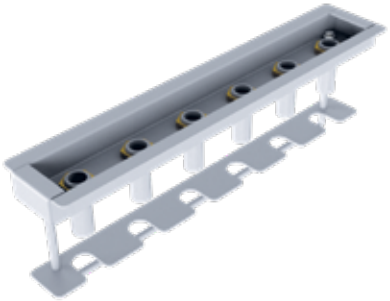


Basket shelf IC-70

A stainless steel shelf for placing DIN baskets.

Basket shelf combined IS-70

A stainless steel shelf for a combined solution. With a dedicated space, it allows both anaesthesia breathing circuits and DIN baskets for surgical instruments to be positioned.

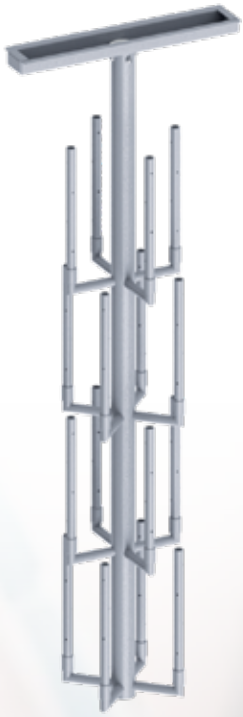


Tube graft for anaesthesia

A stainless steel hose holder for holding anaesthesia breathing circuit tubing.
Capacity up to 6 tubes.

Balloon graft for anaesthesia

A stainless steel balloon holder to hold balloons for anaesthesia breathing circuits.
Capacity up to 6 balloons.



Rotating balloons rack for anaesthesia

Made of stainless steel, it allows 16 anaesthesia balloons to be hung and dried.
Thanks to its rotating movement, the anaesthesia balloons can be inserted manually and easily onto the insert.

Notes

HOSPITAL

DENTAL

LABORATORY

DRYING AND STORAGE CABINETS

CSSD

RETIREMENT HOMES

STAINLESS STEEL FORNITURE

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