The compact class

NEW
FLEXIOSYSTEM
for details see page 8-9

ecological + efficient

HD 450 / HD 450 Injection

The thermal-disinfector

Made in Germany

Dear Madam,
Dear Sir,

The treatment of your patients demands professionality and dedication from you every day. They depend on you and demand that your work be of the highest standards.

To achieve all this, your practice has to run smoothly in the background. This calls for more than just your medical expertise. You also have to be someone who can run a practice – particularly when investment in high-quality equipment is concerned.

The same professionality is necessary when it comes to the safe preparation of your instruments.

Products from IC Medical combine many years of experience with the highest quality, innovation and attractive design. The result is equipment that satisfies the highest quality expectations – furthermore at a reasonable price-to-performance ratio.

Our HD 450 thermal-disinfector fits that bill perfectly.

Yours,

Thomas Blumenschein
Manager of IC Medical GmbH

The intelligent solution for dental and specialist practices

ecological + efficient

Short running time, low water and electricity consumption

With its efficient cleaning and disinfection technology and precise control of all the processes, the HD 450 thermal-disinfector allows you to prepare all your instruments quickly and thoroughly.

Water consumption per batch: 12 liter
Power Consumption per batch: 0.67 kWh

Compact and space-saving design – can be used as a tabletop or built-in device

The HD 450 is the ideal thermal-disinfector, for example for dental practices up to 3-4 treatment rooms. Each cleaning and disinfection cycle can prepare around 300 surgical instruments weighing up to 6 kg in total.

H 450 mm

ThermoTab technology

Just one individual ThermoTab is required for each cleaning and disinfection cycle. No further cleaning solutions needs to be added. This saves you space, because it makes a dosing system for liquid cleaning solutions redundant.

IC Touch-Control

The HD 450 is very easy to use thanks to its integrated IC touch display. Easy operation is guaranteed! Every individual process step can be followed on the IC touch display, providing you with optimum control.

The ergonomic solution: when hooked up to an external control element, it can be managed via a wall-mounted or standing display.

The Robert Koch Institute recommends:

„When cleaning and disinfecting medical devices we must differentiate between manual and mechanical preparation, whereby preference must be given to the latter."

„Straight and contra-angle handpieces should also be prepared by a machine, in order to clean and disinfect them both internally and externally."

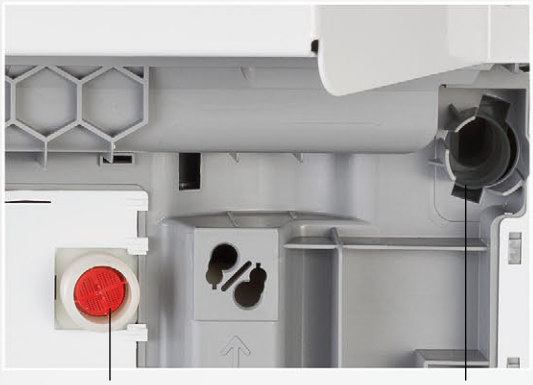
Bundesgesundheitsblatt [Federal Health Gazette] - Health research - Health protection 10 · 2012

Extensively tested and validable

The HD 450 thermal-disinfector is manufactured in Germany in compliance with all relevant European standards and guidelines.

Progress through innovation

Integrated since the first model series of the thermal-disinfector HD 450: the variable-speed circulation pump with built-in heating elements. It provides a pefect water pressure and low water consumption. The direct heating of the water in the pump ensures short running-times.



Cold water ¾"

Wastewater connection

Network port

Power

Connection
External control element

Start-up

The HD 450 thermal-disinfector can be installed as a built-in unit or used as a free-standing device on a worktop.

Operation requires:
Power – 230V, 50/60 Hz
Water – wastewater connection and cold water ¾"

HD 450 Injection

The HD 450 Injection thermal-disinfector offers the additional option of preparing up to eight straight and contra-angle handpieces. Our new water loading system ensures reliable disinfecting of all internal surfaces of hollow instruments as well as cleaning and disinfecting of the external surfaces.

3-pump system

It gently prepares, cleans and disinfects straight and contra-angle handpieces using its own pump circuit with our new Pulso system for the injection bars.

Straight and contra-angle handpieces and saliva ejectors from all manufacturers can be prepared with our unique variable design.

New:
Flexio-Adapter for air scalers
Holds up to 6 air scalers

Item Number: 105 023

HD 450

The basic model:
space-saving, safe and quick

Reliable documentation and monitoring of all process parameters through the most up-to-date sensors and technology

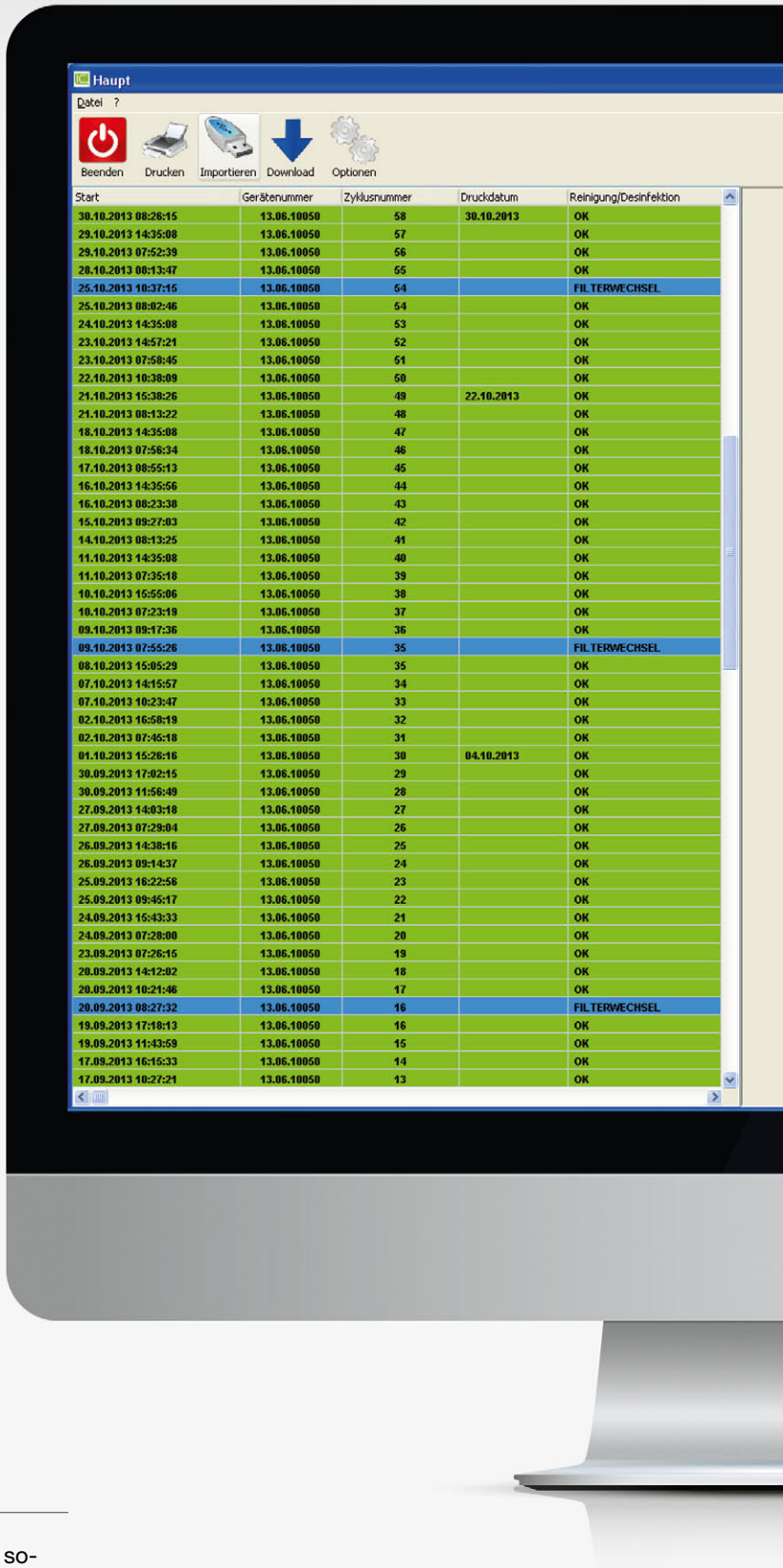
Documentation of all process parameters is saved as a report in the appliance.

This permanent process documentation includes comprehensive analyses of parameters, providing you with ultimate reliability for process tracing in target–actual values. This includes the A0 value, dosage monitoring, conductivity, spraying arm monitoring and temperature curves.

The HD 450 is fitted as standard with a network interface and USB port, for reading the process documentation.

The reports can be read using the documentation software supplied; conveniently via the practice's network, or via a USB stick.

You can also use your existing computer to create a digital archive of the reports. Interfaces for Segosoft and DOCma (DIOS) are available.



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29.10.2013 07:52:39	13.06.10050	56		OK
28.10.2013 08:13:47	13.06.10050	55		OK
25.10.2013 10:37:15	13.06.10050	54		FILTERWECHSEL
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17.09.2013 16:15:33	13.06.10050	14		OK
17.09.2013 10:27:21	13.06.10050	13		OK

Legal compliance:

In the event of an allegation following a medical procedure, a so-called reversal of the burden of proof occurs. This means that the practitioner must prove that the instruments used were prepared hygienically. Records should be kept available for this purpose for up to 30 years.

Thanks to the unbroken, comprehensible documentation of hygiene measures that our HD 450 provides, this proof is easily produced, enabling you to refute any allegations of this nature.

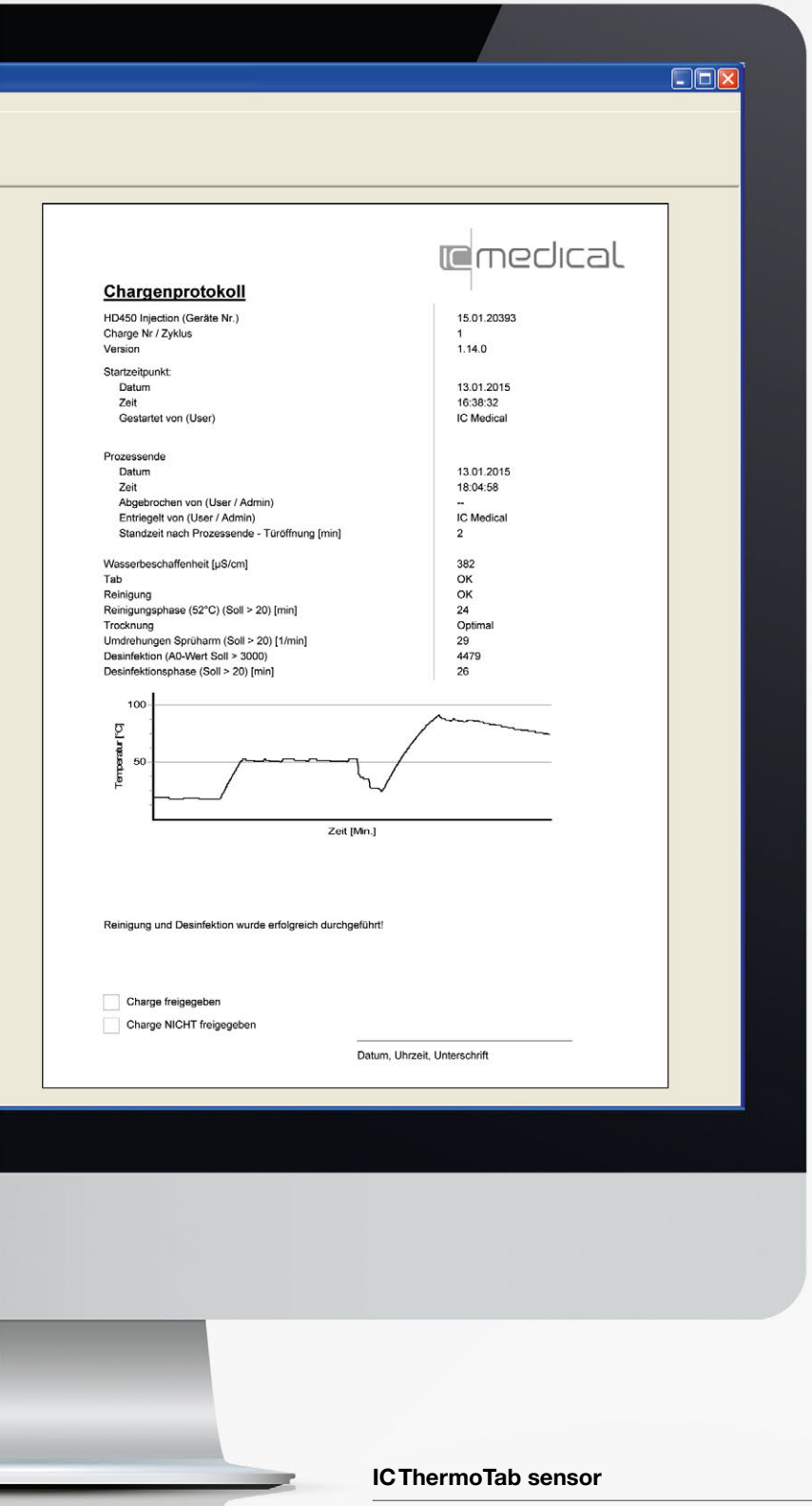
The HD 450's reliable process documentation enables you to meet legal requirements and fulfil your obligations under the German RKI guidelines and MPBetreibV regulations.

IC HotDrying process

The IC HotDrying process allows you to achieve optimum drying results.

This innovative technology also maintains the high hygiene standards in the drying phase, as very high air purity is guaranteed at 90 degrees.

The IC HotDrying system informs you exactly when the appliance can be opened.



IC rotor sensor

To ensure consistent and safe cleaning and disinfecting results, the spraying pressure must always be perfect. This is achieved by monitoring the rotational speed of the spraying arm, which is not allowed to fall under a minimum speed.

With the new spraying arm control unit, 'IC rotor sensor', the exact rotational speed of the spraying arm is constantly monitored and documented. The process documentation shows whether the values fall within the target–actual range, and any deviations from it are recorded and output. If there are any deviations from the defined values, a warning message is shown and the programme is immediately halted, so that the user can rectify the fault and perform a valid preparation. This offers effective protection against blockages in the spraying arm, e.g. by instruments, and allows you to form conclusions about the performance of the equipment's cleaning apparatus.

Adherence to the correct rotational speed for the spraying arm is an important factor when exactly reproducing a valid process. As a user, this new technology offers you an enormous increase in safety as far as mechanical preparations are concerned.

- Rotational speed of the spraying arm is monitored constantly
- Control of the water pressure

IC ThermoTab sensor

Precise dosage of the process chemicals being used is a decisive factor in achieving good preparation results. The relevant standard, DIN EN ISO 15883, also prescribes an autarchic monitoring of the process chemistry.

- Monitoring with the IC ThermoTab sensor offers considerably more security than conventional measuring systems:
- Exact measurement of the process chemical concentration
- Accurately monitored preparation processes
- Reproducibility of validated processes
- Perfect cleaning and disinfection results

IC conductance sensor

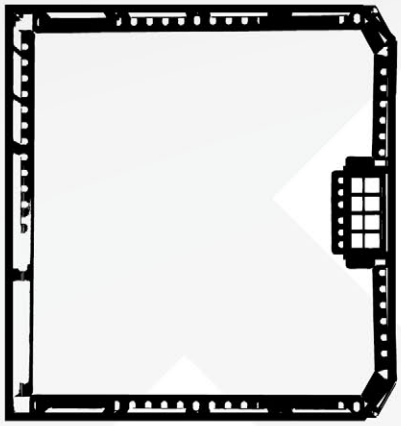
The integrated IC conductance sensor and the running conductivity measurements monitor values defined against the norm, so that no residue or remnants can remain on the instruments, presenting a risk to patients.

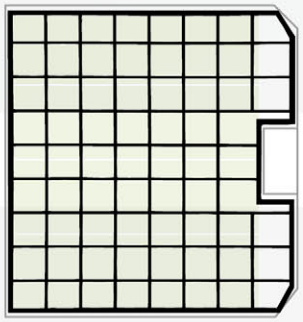
- Furthermore, recording conductivity over the entire course of the process offers extra security when exactly reproducing valid processes:
- Dosing monitoring, irrespective of temperature
- High level of measurement accuracy

As well as being toxologically harmless, the instrumentarium retains its value better, providing another significant advantage.

Flexio basic basket 1

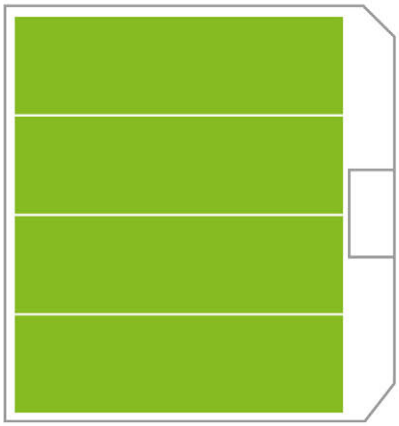
For use in HD 450 Basic without Flexio injection bar **and** for use in HD 450 Injection with Flexio injection bar according to your needs.





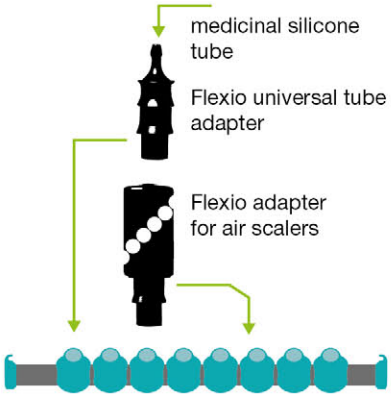
Flexio inlay basic basket 1 46×46

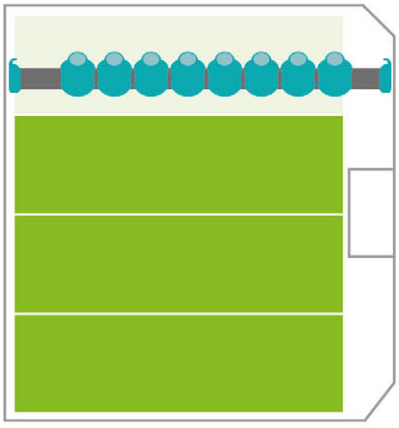
Without Flexio injection bar



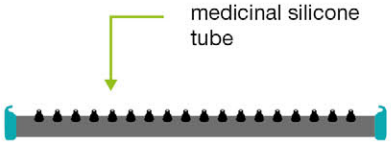
Optional for HD 450 Injection devices:

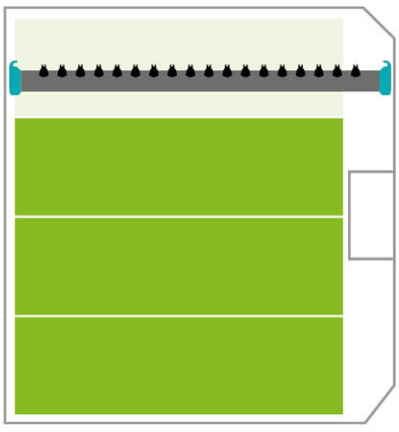
Flexio injection bar 8 adapter

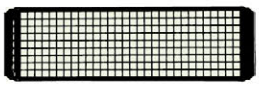




Flexio injection bar 18 adapter

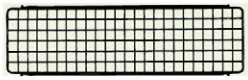




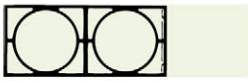


Flexio sieve cage 10×10

Flexio instrument holder ENT 16



Flexio instrument holder ENT 144

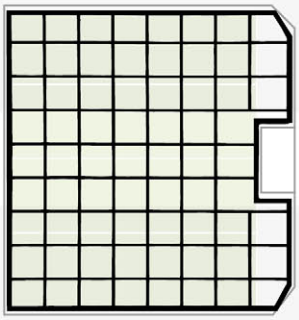


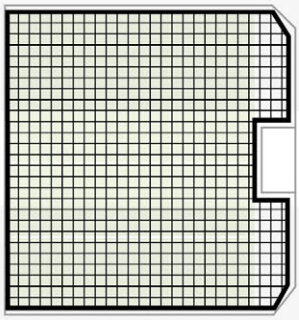
Flexio holder small part box DUO

Flexio holder small part box MONO

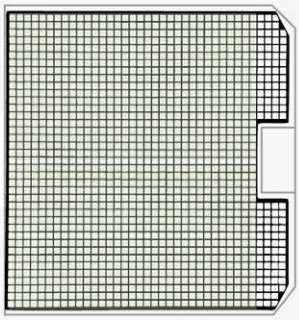
Flexio small part box fine-meshed

Flexio small part box coarse-meshed

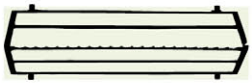




Flexio inlay basic basket 1 15×15



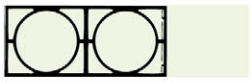
Flexio inlay basic basket 1 10×10



Flexio universal holder for 8 specula oder 21 forceps

Flexio universal holder for 4 specula oder 11 forceps

Flexio instrument holder

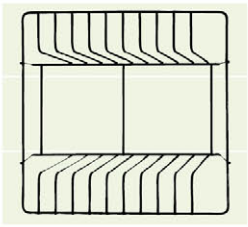


Flexio holder small part box DUO

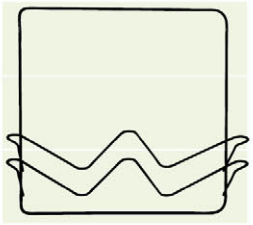
Flexio holder small part box MONO

Flexio small part box fine-meshed

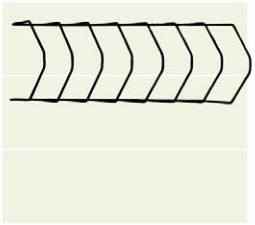
Flexio small part box coarse-meshed



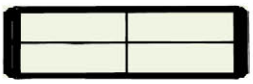
Flexio salver holder



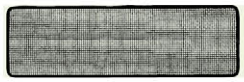
Flexio tray holder 2



Flexio tray holder 7



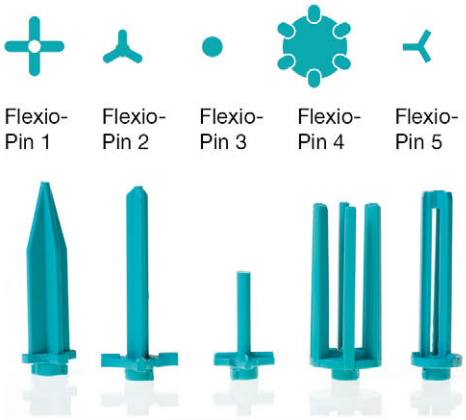
Flexio basket open



Flexio deposit fine-sieve 2,5 × 2,5

Flexio instrument holder

Flexio universal holder for 4 specula oder 11 forceps (up to 2 per basket)



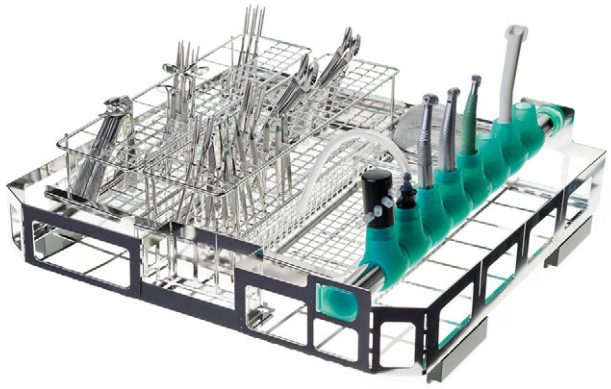
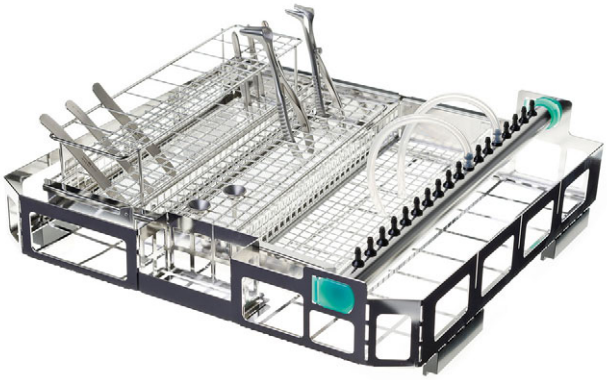
With several kinds of Flexio-Pins you can adjust your Flexio-basic basket according to your specific applications.

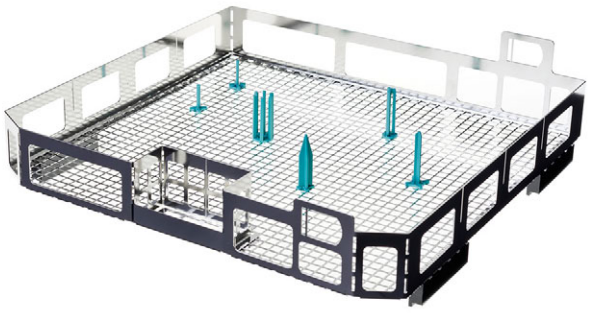
New on our website www.icmedical.de

Product information movie for HD 450

Loading examples

We offer different accessories for dentists, gynaecologists and ENT physicians:

Loading example for dentists	Loading example for ENT
	
1 × Flexio basic basket 1	1 × Flexio basic basket 1
1 × Flexio inlay basic basket 1 46×46	1 × Flexio inlay basic basket 1 46×46
1 × Flexio injection bar 8 adapter	1 × Flexio injection bar 18 adapter
1 × Flexio adapter for air scalers	Flexio medicinical silicone tube
1 × Flexio universal tube adapter 4-6mm	1 × Flexio sieve cage 10x10
2 × Flexio basket open	2 × Flexio basket open
2 × Flexio instrument holder	1 × Flexio deposit fine-sieve 2,5 x 2,5
1 × Flexio sieve cage 10x10	1 × Flexio instrument holder ENT 144
1 × Flexio holder small part box MONO	1 × Flexio instrument holder
1 × Flexio small part box fine-meshed	

Loading example for gynaecology	Loading example Flexio
	
1 × Flexio basic basket 1	1 × Flexio basic basket 1
1 × Flexio inlay basic basket 1 15×15	1 × Flexio inlay basic basket 1 10×10
3 × Flexio universal holder for 8 specula or 21 forceps	various Flexio-Pins as required

HD 450 as built-in combination

The HD 450 thermal-disinfector is used both as tabletop and as built-in device. The stainless steel base cabinet for the thermal-disinfectors of the HD 450 series allows an easy installation into an existing gap in your sterilization line. You can easily store your process chemicals or another basic basket inside the base cabinet.

External control element

Wall display or stand display for ergonomic purposes

Stainless steel base cabinet
incl. steel blinds and telescope-flap. Storage space for your process chemicals or another basic basket.

Dimension HxWxD: 35×55×50
Storage dimension HxWxD: 20.5×52×46

105 035
Flexio basic basket 1

for thermal-disinfectors HD 450 basic and HD 450 Injection

holds up to 4 baskets

105 008
Flexio basic basket 1

for thermal-disinfectors HD 450 basic and HD 450 Injection

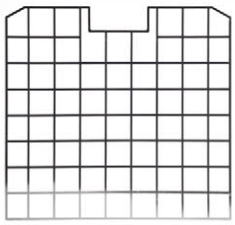
holds up to 4 baskets

105 045
Flexio injection bar 8 adapter

for thermal-disinfector HD 450 with adapter system. Applicable inside basic basket 105 008 / 105 035

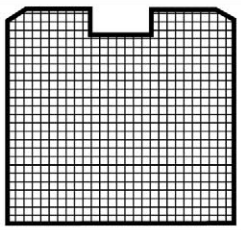
105 046
Flexio injection bar 18 adapter

for thermal-disinfector HD 450 with adapter system. Applicable inside basic basket 105 008 / 105 035



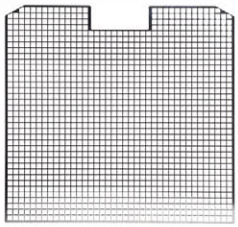
105 036
Flexio inlay basic basket 1 46×46

grid 46×46
for Flexio basic basket 1 (105 035)



105 037
Flexio inlay basic basket 1 15×15

grid 15×15
for Flexio basic basket 1 (105 035)



105 038
Flexio inlay basic basket 1 10×10

10×10
for Flexio basic basket 1 (105 035)

105 009
Flexio sieve cage 10×10

basket for holding small part containers or instrument holders ENT

105 060
Flexio-Pin 1 (5 pieces)

for fixing instruments on the Flexio inlay 10×10 (105 038)

105 061
Flexio-Pin 2 (5 pieces)

for fixing instruments on the Flexio inlay 10×10 (105 038)

105 062
Flexio-Pin 3 (5 pieces)

for fixing instruments on the Flexio inlay 10×10 (105 038)

105 063
Flexio-Pin 4 (5 pieces)

for fixing instruments on the Flexio inlay 10×10 (105 038)

105 064
Flexio-Pin 5 (5 pieces)

for fixing instruments on the Flexio inlay 10×10 (105 038)

105 010
Flexio basket open

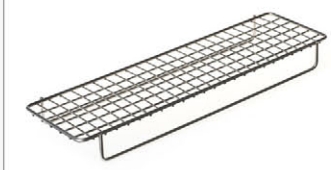
basket for holding depositors, Flexio instrument holder or Flexio universal holder

105 021
Flexio deposit fine-sieve 2,5 × 2,5

for Flexio basket open

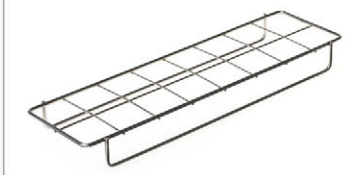
105 011
Flexio instrument holder

upright, for holding up to 72 instruments. An additional 8 larger compartments for storing aspirators or forceps etc.



105 012
Flexio instrument holder ENT 144

for holding up to 144 ENT instruments

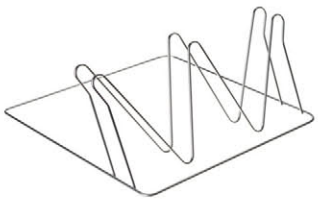


105 022
Flexio instrument holder ENT 16

for holding up to 16 ENT instruments, e.g. ear specula

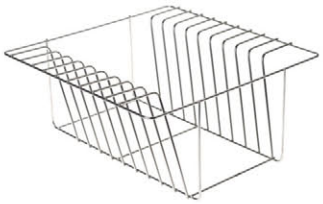
105 033
Flexio universal holder for 4 specula oder 11 forceps

105 034
Flexio universal holder for 8 specula oder 21 forceps



105 013
Flexio tray holder 2

holds up to 2 trays; suitable as component together with 2 inserts or basket



105 014
Flexio salver holder

holds up to 9 salvers

105 015
Flexio tray holder 7

holds up to 7 trays

105 005
External control element

Wall display or stand display for ergonomic purposes

105 023
Flexio adapter for air scalers

holds up to 6 air scalers

105 025
Flexio universal tube adapter (4 pieces)

for adapting universal surgical instruments (HD 450 Injection only) via medical silicone tube. Tube size: 4-6mm

105 026
Flexio medicinal silicone tube

medicinal silicone tube, inner diameter 4-6mm, length: 2m

105 029
Flexio holder small part box DUO

holder for small part box fine- and coarse meshed

105 032
Flexio holder small part box MONO

holder for small part box fine- and coarse meshed

105 030
Flexio small part box fine-meshed

insert for Flexio holder small part Mono/Duo

105 031
Flexio small part box coarse-meshed

insert for Flexio holder small part Mono/Duo

Abb. ähnlich

105 040
Base cabinet

For an easy installation of your HD450 into an exisiting gap 60 x 80cm of your sterilization line.

105 019
Service kit for
HD 450 / HD450 Injection

for yearly maintenance;
consists of spraying arm
and microfilter

105 027
System separator

for securing drinking water
systems against return flow,
as per DIN EN 1717

105 028
Aqua stop

for protecting your equipment
against overflow

105 058
Coarse filter

to be used inside the microfilter.
Protects the pump system against
intrusion of surgical small parts.

105 006
Injection filter
15 pack

Spare filter for the HD 450
Injection

100 921
Oxides ThermoTabs

Process chemicals for a
thorough preparation of your
instrumentarium.
MP Class I; Contents: 50 pieces

103 013
ServiceTabs

Cleaning Care for
thermal-disinfectors
Contents: 20 pieces

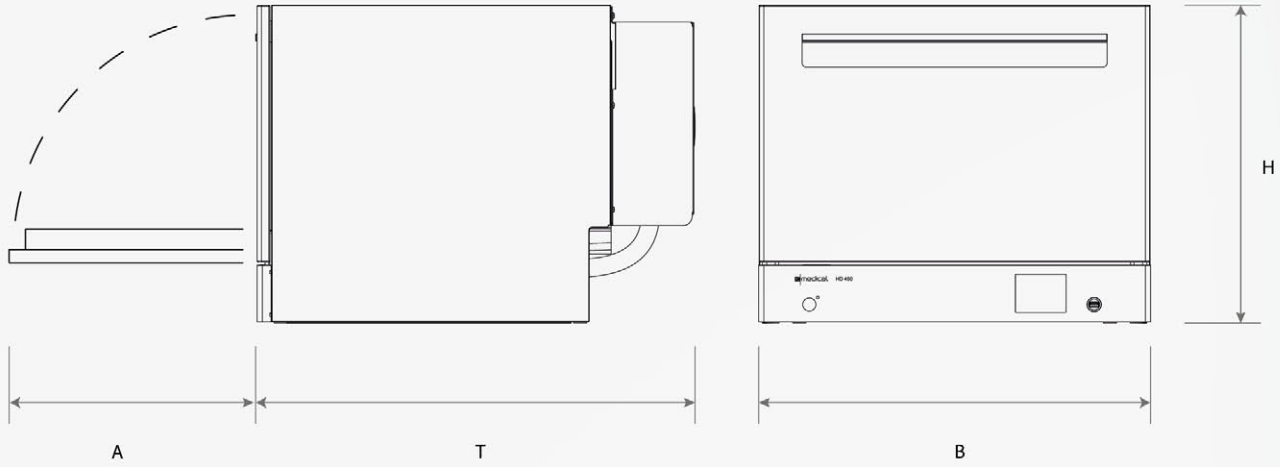
103 009
IRA Klar

rinsing agent for mechanized
preparation if instruments

1 liter

103 006
IRA Salt

Water softener salt,
from 21 °dH,
contents: 5kg



	HD 450 – the basic model, space-saving, safe, quick	**HD 450 Injection –** suitable for the preparation of up to eight straight and contra-angle handpieces
Type designation	HD 450	HD 450 Injection
Item Number	105 000	105 001
Device dimensions (HxWxD)	45 x 55.5 x 50 cm	45 x 55.5 x 62 cm
Washing chamber (HxWxD) H = maximum loading height D = maximum loading depth	33.5 x 49.5 x 45 cm	33.5 x 49.5 x 45 cm
Outreach (A)	37 cm	37 cm
Weight (empty)	18 kg	24 kg
Floor loading	approx. 1000 N/m²	approx. 1200 N/m²
Washing chamber volume	74 litres	
Electrical connection	16 A; 240 V; 2.4 KW	
Max. sound power (cleaning)	58 dBA	
Heat loss	0.55 kW/h (2.7 MJ/h)	
Ambient temperature	15 - 35°C	
Relative humidity	30 - 60%	
Max. installation altitude	2000 m	
Installation category	2	
Air pressure	75 kPa – 106 kPa	
Cold water / demineralised water connection	3/4”	
Wastewater connection	DN21	
Water quality	ensure minimum drinking water quality in accordance with the Drinking Water Ordinance (TrinkW2001) and local regulations	
Minimum flow pressure	150 kPA (1.5 bar)	
Recommended flow pressure	250 kPa (2.5 bar)	
Maximum water pressure	1000 kPa (10 bar)	
Minimum rinsing pressure	140 mbar	
Max. wastewater temperature	93 °C	
Wastewater volume per hour	approx. 20 l (in shorter intervals)	
Capacity of the dewatering pump	max. 30 l/min. (volume in the wastewater hose)	
Length of the run-off and supply hoses	Cold water inlet / wastewater: 1.80 m / demineralised water inlet: 1.60 m	
Length of the power cable	2 m	
Internal storage	Up to 3000 cycles	
Interfaces	USB, network (RJ45)	
Contamination level	Category 2	
Enclosure specification (in accordance with IEC 60529)	IP20	
CE marking	0297	
Conforming with the standards	DIN EN ISO 15883-1/2; EN 61010-2-040	

The solution for dental and specialist practices

Dental and specialist practices have high standards for instrument preparation. Preparation should run safely, be completely reliable and also affordable.

We offer you the perfect solution:
the HD 450 thermal-disinfector – the new and innovative tabletop or stand-alone unit for cleaning and disinfecting your instruments.

IC Medical is certified in accordance with EN DIN 13485 for medical products. Its headquarter is in Rudersberg-Steinenberg, Baden-Württemberg.

We have been developing innovative equipment and accessories for 25 years.
Our products stand out because of their user-friendliness and clear design, and they have won many innovation and design prizes.

We are guided by our clients' requirements and would like to support them in optimising their processes, ensuring proper hygiene and, of course, in keeping the cost of this within reasonable limits.

Produced at our location in
Baden-Württemberg.

icmedical
hygiene for professionals

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Qualitätsmanagement ISO 13485

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