

OLYMPUS

Your Vision, Our Future

Endoscope Reprocessing

ETD3

Automatic Endoscope Reprocessor



ETD3 – the new standard in endoscope reprocessing.





The standard in endoscope reprocessing: The Olympus ETD3.

The Olympus ETD system has become the pioneering standard for the reliable hygienic reprocessing of endoscopes: user-friendly machines that clean and disinfect endoscopes safely after use, quickly preparing them for the next time they are needed.

Together, Olympus, Miele Professional and Ecolab have set themselves the task of raising this high standard even further. The result of this cooperation is the ETD3.



OLYMPUS



Miele
PROFESSIONAL



ECOLAB[®]



ETD System – hygiene and safety redefined

With its innovative and unique features and processes, the ETD3 sets standards in the automatic reprocessing of endoscopes. Validated processes and maximum compatibility with Olympus flexible endoscopes – the Olympus ETD3 ensures more efficiency and safety for your endoscopy.



ETD
System

The Peracetic Acid Process: Improved chemicals provide enhanced protection.



PAA Process

For a long time, doctors and nurses have been asking for a glutaraldehyde-free cleaning process. The peracetic acid process was developed as an efficient process which offers optimum protection for ETD3 users. In the process, three chemicals are used which fulfill all required safety standards and are easy to use:

- the surfactant-based detergent has been optimized for lower temperatures
- the disinfectant is based on peracetic acid (PAA)
- the activator solution is dosed together with the disinfectant to ensure full material compatibility



Olympus PAA process

Unlike glutaraldehyde, peracetic acid is not a protein fixative. In comparison to the conventional GA process, a higher cleaning effect during the overall process is given. Furthermore, the PAA process prevents the formation of biofilms, resulting in increased safety for your patients.



The PAA process works at 35 °C.



Time Saving – shorter reprocessing time

The excellent disinfection characteristics of peracetic acid allow the ETD3 to carry out the process at a temperature of just 35 °C. This considerably reduces the time for heating up the water, resulting in a significantly shorter reprocessing cycle. The endoscope is ready for use even quicker, and the cost-effectiveness of your investments noticeably increases.



The best formula for your endoscope

Fully functional at low temperatures, the PAA process is gentle on your endoscopes. Extensive research was carried out to develop a formula for the composition of chemicals which ensures full material compatibility with your flexible Olympus endoscopes.

The ETD System provides full compatibility with Olympus endoscopes.



Verified Quality

Independent hygienic expert reports have verified the reprocessing results of the ETD3. The test results confirm the reliable cleaning, disinfection and hygienic safety of the ETD3 system according to state-of-the-art international standards.

Tests of ETD3 system with peracetic acid (PAA) process	Laboratory
1. Type testing acc. to EN ISO 15883 (in progress)	Institute of Technical Hygiene, Charité Berlin (Germany) Institute of Hygiene, Gelsenkirchen (Germany)
2. Bactericidal, mycobactericidal, yeasticidal, virucidal and sporicidal efficacy of PAA process chemicals	Ecolab (Germany)
3. Efficacy against Clostridium difficile spores	Institute of Hygiene, University Bonn (Germany)
4. In use test of ETD3 PAA process	T. Slotsbjerg, Hvidovre Hospital (Denmark)
5. ETD3 PAA: practical evaluation	Hospital Infection Research Laboratory, Birmingham (United Kingdom)
6. Hygienic assessment of ETD3 PAA process	Institute of Hospital Hygiene and Microbiology, Graz (Austria)
7. Non-sensitising effect of rinse water	Henkel KGaA (Germany)
8. Ecological evaluation of EndoDet, EndoDis and EndoAct	Ecolab (Germany)
9. Hazard assessment EndoDet, EndoDis and EndoAct	Ecolab (Germany)

The ETD3 is also available with the Olympus glutaraldehyde process instead of the PAA process.

Tests of ETD3 with glutaraldehyde process	Laboratory
1. ETD3 with glutaraldehyde process: DGKH method	University of Halle
2. ETD3 with glutaraldehyde process: HIRL method	Hospital Infection Research Laboratory Birmingham

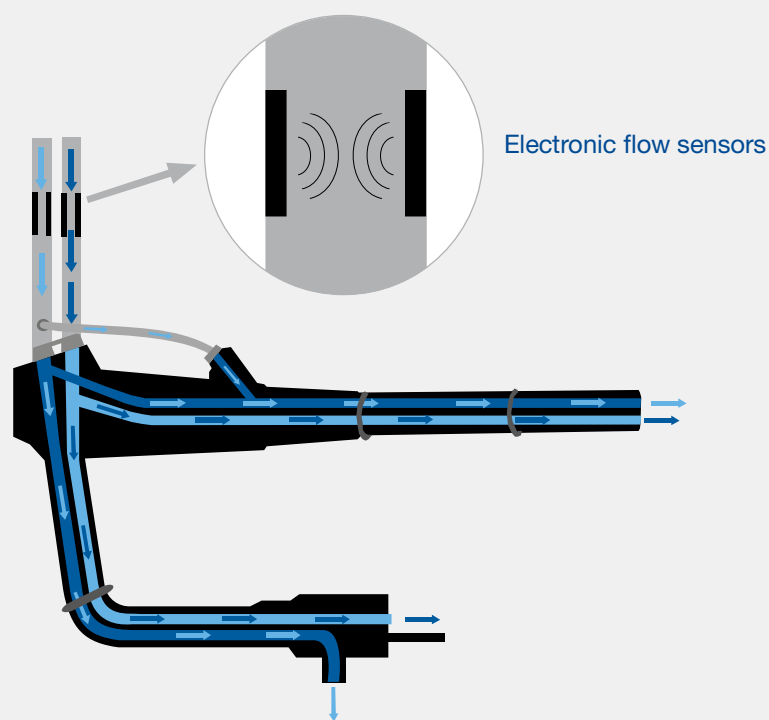
Flow Control: Ensuring flow through endoscope channels.



Flow Control – reliable irrigation of endoscope channels

Flow Control supports monitoring the flow of liquids through the endoscope's channels.

A continuous flow of liquids makes sure that the channels are thoroughly disinfected. If flow levels diverge from the norm, the reprocessing cycle is interrupted, since a drop in flow indicates that a channel is blocked. An above-average reading, on the other hand, means that the tube has probably not been attached to the endoscope correctly. In this case, the ETD3 asks the user to correctly connect the adaptor in order to ensure that satisfactory flow rates are maintained.



Electronic sensors ensure flow through the endoscope channels (schematic view).



Flow Control checks the correct attachment of adaptors.

EndoID: Automatic identification and documentation.



EndoID – all endoscope data under control

A precondition for Flow Control is EndoID, the automatic endoscope recognition integrated in the ETD3. Each Olympus endoscope in the ETD3 is automatically identified at the start of the process by means of a transponder. As soon as the endoscope is recognized, the ETD3 calls up the correct flow rates for the channels of that specific endoscope from a database. As the manufacturer, Olympus knows the channel design of each and every endoscope and has used this expertise in the design of Flow Control.



Endoscopes are automatically identified via transponders.

Full documentation provides legal safety

EndoID compiles a report for each disinfection cycle, which includes:

- serial number of the ETD3
- type and serial number of the reprocessed endoscope
- name of the person who started the ETD3 cycle
- all process parameters
- report that all reprocessing parameters were correct and that a proper reprocessing result has been achieved

The report can be printed out or sent directly to an endoscopy information management system. The easy documentation of reprocessing will enable you to install a reliable quality assurance system in your endoscopy unit.



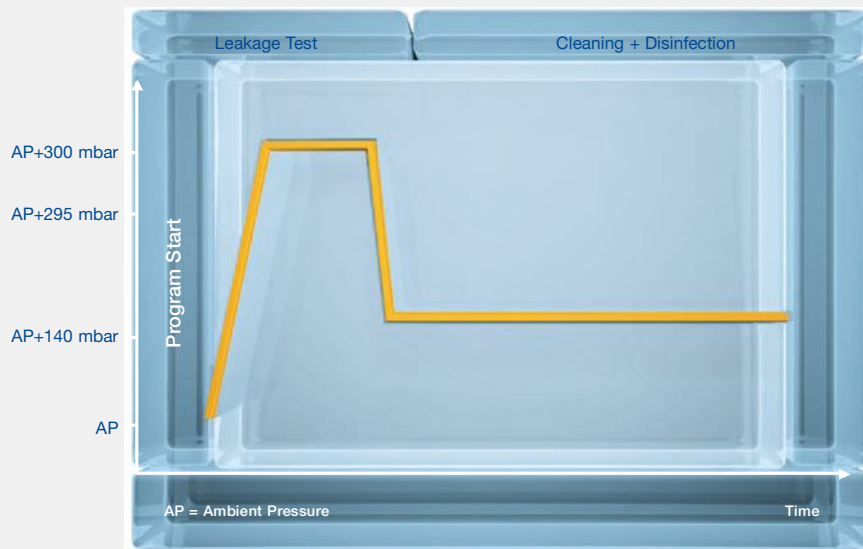
Reprocessing reports provide legal and hygienic safety.

Automatic Leakage Tester: Effective prevention of repairs.



Leakage Tester – improved safety and convenience

The leakage tester checks all endoscopes thoroughly for leakages, thereby identifying potential problems before they are able to cause serious damage. This is an effective way of preventing the need for repairs since damages due to leakage are the most common cause of costly endoscope repairs.



The leakage tester prevents fluids from entering your endoscopes.

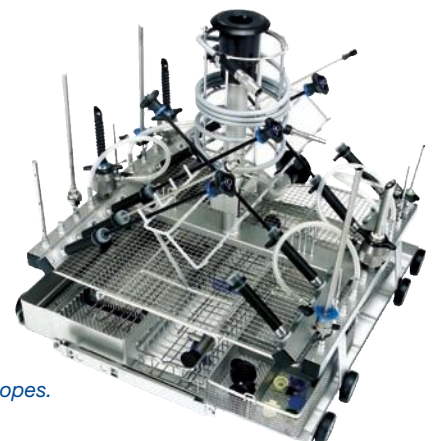


Thermal Process – thermal disinfection for rigid endoscopes

Rigid endoscopes can be cleaned and disinfected in the ETD3 prior to autoclaving. It cleans and disinfects reliably without the use of a disinfectant. The high-temperature process reduces your costs and makes the ETD3 a versatile disinfection device for combined endoscopy units.

Automatic basket identification

The ETD3 automatically recognizes whether the basket for rigid endoscopes has been inserted. Only then the thermal process for rigid endoscopes can be started, using temperatures higher than 60 °C. The automatic basket identification effectively prevents the selection of wrong programs and temperatures which could damage your valuable flexible endoscopes.



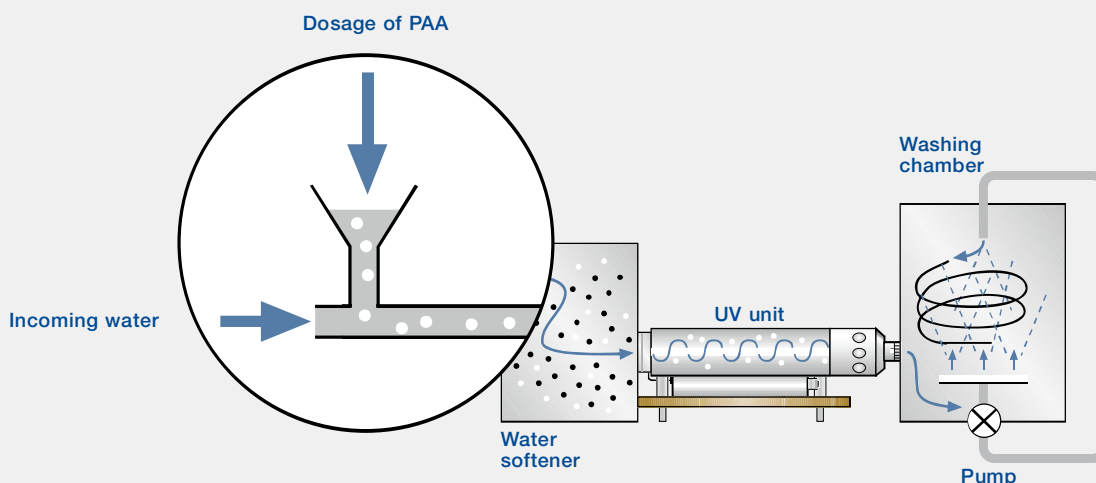
Special basket for rigid endoscopes.

New Rinse Water Treatment: Revolutionizing decontamination.



Rinse Water Treatment – new reprocessing system with PAA

Using PAA also revolutionizes the decontamination of the rinse water in the ETD3. Just a small amount of peracetic acid in the rinse water has a bacteriostatic effect. In conjunction with the improved UV light unit, this innovative concept prevents the endoscope from being recontaminated by the rinse water. As there is no more need for heating the rinse water, this method contributes substantially to the reduction of the overall cycle time.



Small quantities of PAA and the UV unit prevent recontamination of endoscopes.



UV unit – economical rinse water treatment

The tried and tested built-in UV unit ensures a constantly high water quality for all process steps. An effective reduction of water bacteria is achieved with the addition of PAA to the rinse water. The combination of these two methods ensures that the microbial quality of the rinse water does not impair the standard of cleanliness and disinfection of the endoscopes.



ETD3 – ensuring high rinse water quality.

Increased performance down to the last detail.

Volumetric Dosage Monitoring.

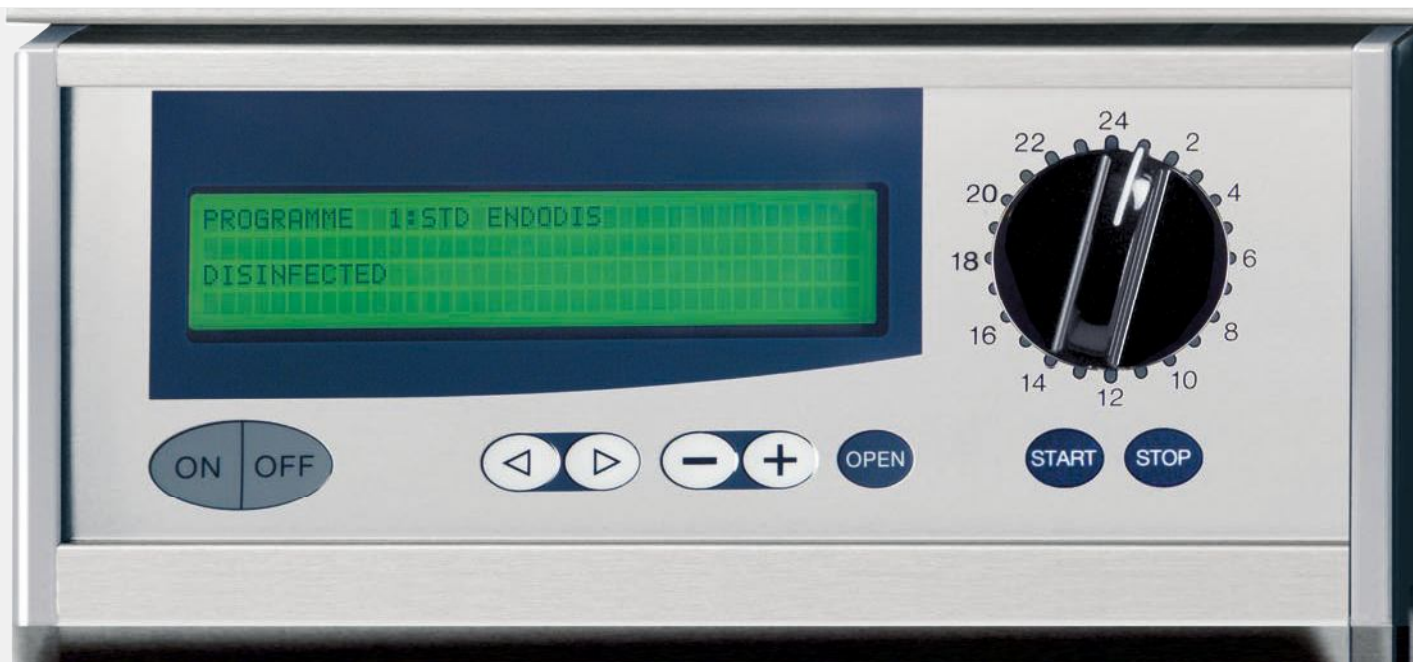
The proper dosage of chemicals is essential in order to achieve the correct concentration of the reprocessing solution. In the ETD3, the dosage quantities of all chemicals are measured using an impeller rotation counter. This direct volumetric control guarantees the correct and precise dosage of chemicals and consequently the correct concentration of the disinfection solution.

Elevator channel supply for duodenoscopes.

A special high-pressure pump improves the disinfection of the elevator channel of duodenoscopes.

Active monitoring of the spray arm.

A magnetic sensor constantly monitors whether the ETD3 spray arm is rotating correctly. This ensures that the outer surfaces of the endoscope are cleaned perfectly.



An overview of ETD3 features.



ETD System



Easy Installation



Easy Operation



Verified Quality



PAA Process



Time Saving

ETD3



Rinse Water Treatment



UV-Disinfection



Flow Control



EndoID



Remote Maintenance



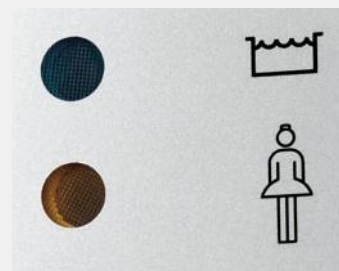
Endoscopy Systems Integration



Leakage Tester



Thermal Process



Technical data of ETD3.

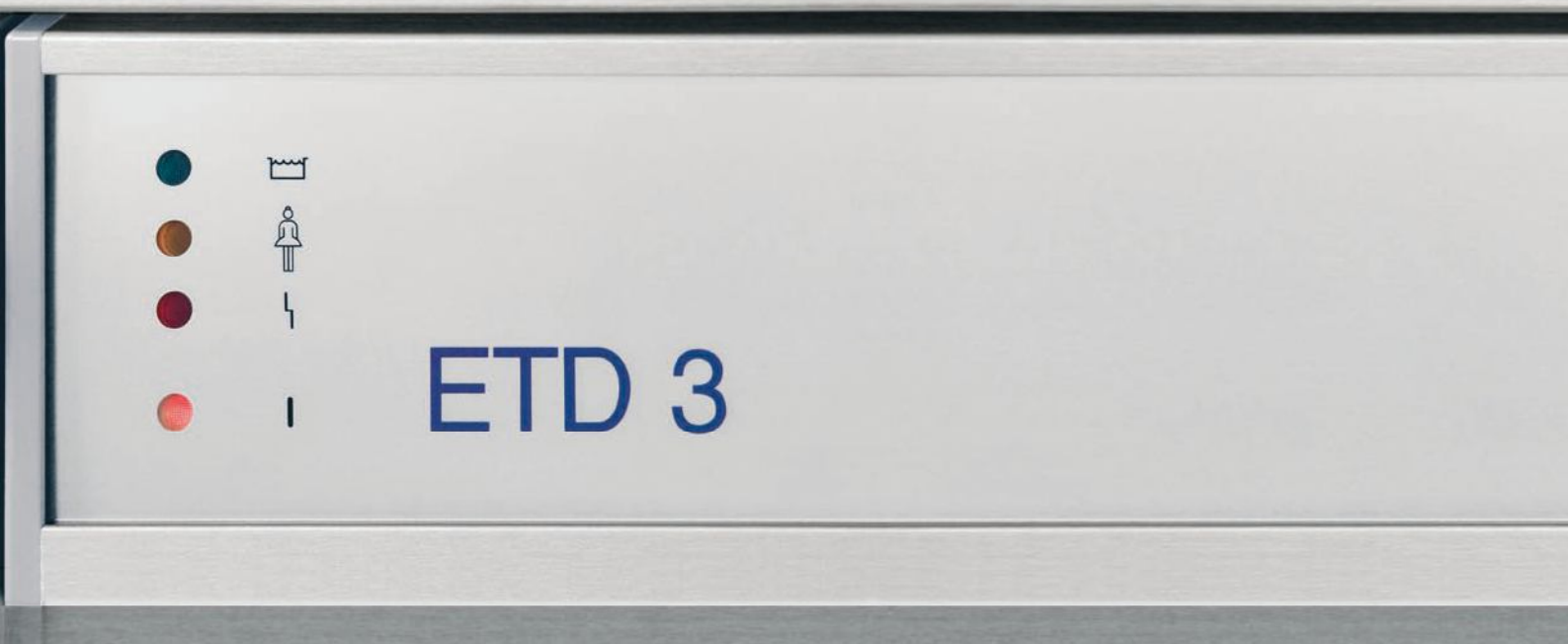
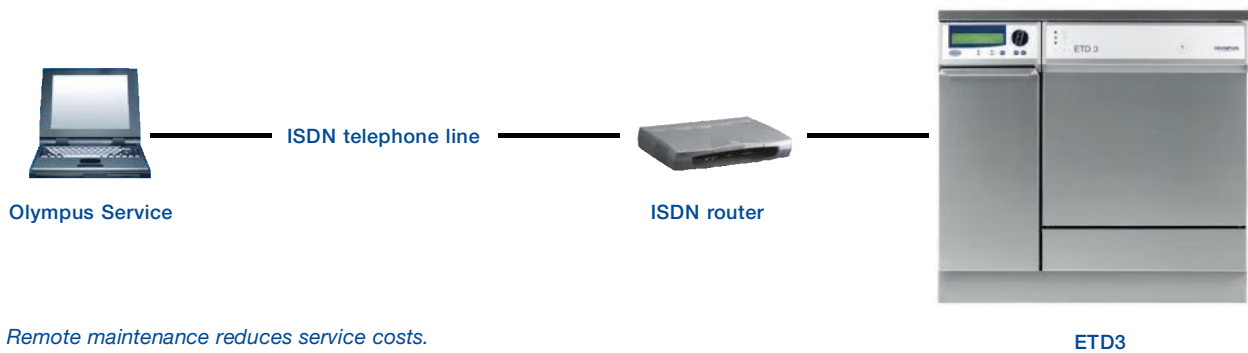
Scope capacity	Simultaneous processing of two endoscopes per cycle
Safety features	<ul style="list-style-type: none"> • Automatic identification of endoscopes (ETD3 Plus version) • Control of flow through endoscope channels (ETD3 Plus version) • Control of correct connection of channel adaptors (ETD3 Plus version) • Permanent level control of cleaner and disinfectant containers, and processing water in the washing chamber • Flow control of cleaner, disinfectant and activator during cycle • Volumetric dosage control of chemicals • Validation of disinfection result • Automatic leakage testing and permanent pressure monitoring • Automatic basket recognition • Monitoring of spray arm rotation • Safety stop for critical air/water temperature • Electronic safety door lock
User interface	LC display 4 x 40 digits
Data interfaces	<ul style="list-style-type: none"> • 10/100 Mbit Ethernet port • Parallel printer interface • RS 232 serial interface • Connector for optional external PC keyboard
EndoID storage capacity	200 different types of endoscope 50 different users
Power supply	400 V, 3 NAC, (50 Hz), 3 x 16 A, max. 9.2 kW or 230 V, AC, (50 Hz), 1 x 30 A, max. 6.7 kW
Water supply	<p>Washing chamber:</p> <p>PAA process: up to 30 °C controlled by thermostat or cold fill</p> <p>Glutaraldehyde process: up to 35 °C–37 °C or cold fill</p> <p>Steam condenser: cold fill</p> <p>Pressure: min. 1 bar, max. 6 bar</p> <p>Consumption: 50 l during STD ENDODIS program cycle</p>
Dimensions	<p>Width: 900 mm</p> <p>Depth: 600 mm</p> <p>Height: 850 mm (incl. cover), 820 mm (excl. cover)</p>
Weight	160 kg
Outer casing	Stainless steel
Specification, design and accessories are subject to change without any notice or obligation on the part of the manufacturer.	



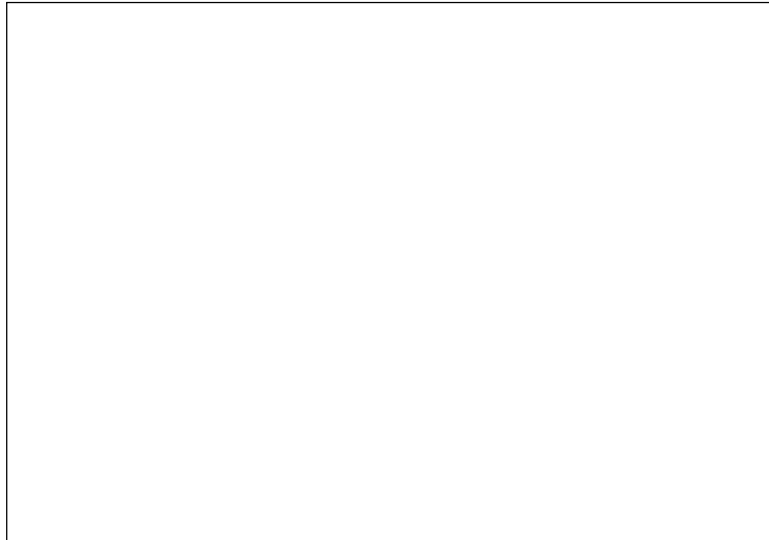


Easy servicing via remote maintenance

During the development of the ETD3, a special focus was placed on the easy serviceability of the machine. The ETD3 is equipped with an ISDN router which allows the Olympus service technician to perform service tasks from the Olympus workshop. Software updates for the ETD3 operating system can easily be carried out via remote access. Errors can be diagnosed and eliminated more easily – there is no need for service technicians to make an extra journey. This will drastically reduce your service and maintenance costs for the ETD3. Remote maintenance is part of the extensive range of ETD3 services, which will help you to prevent problems before they arise.



Your Olympus partner



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