

AUTOMATED BRUSHLESS CHANNELS PRE-CLEANING IN JUST 2-7 MINUTES

Innovating
Hygiene

Aqua
TYPHOON

References

Technical
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Triple Aim

At a glance

AQUATYPHOON

POWERED BY **PENTAX** MEDICAL

The automated brushless endoscope channels pre-cleaning device. It improves reprocessing efficiency, hygiene and patient safety while reducing costs and waste.

At a glance

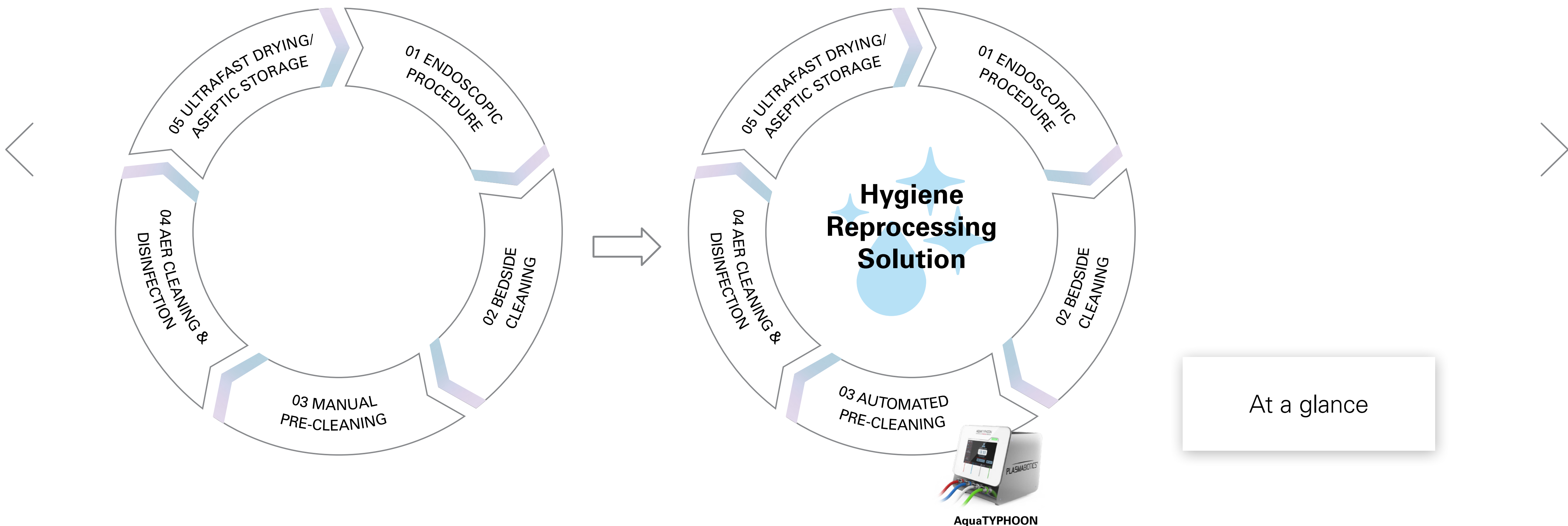


Innovating Hygiene

Aiming to enhance hygiene and patient safety



PENTAX Medical is a pioneer in increasing patient safety and infection prevention in endoscopy. Now, we've reinvented **manual pre-cleaning** as well as **drying and storage** for more efficient processes:



At a glance

Inspired by #PENTAXMedicalTripleAim

AquaTYPHOON™

Alternative solution to manual pre-cleaning

Manual pre-cleaning of endoscopes is time consuming, non-standardized, non-reproducible and non-traceable process, carrying the risk of human errors and generating significant amount of waste (single-use consumables, chemicals).

The AquaTYPHOON automated process provides:

- integrated leak-test
- fast brushless pre-cleaning of all endoscope channels in just 2 to 7 minutes¹⁾
- effective removal of residues, based on pending patent technology, thus reducing the risk of infections



1) See technical data section

AquaTYPHOON™ Highly efficient processes for full reliability



AquaTYPHOON
for fast channels
pre-cleaning

Barcode
scanner

RFID
scanner

AquaJET

Label printer
for full
traceability

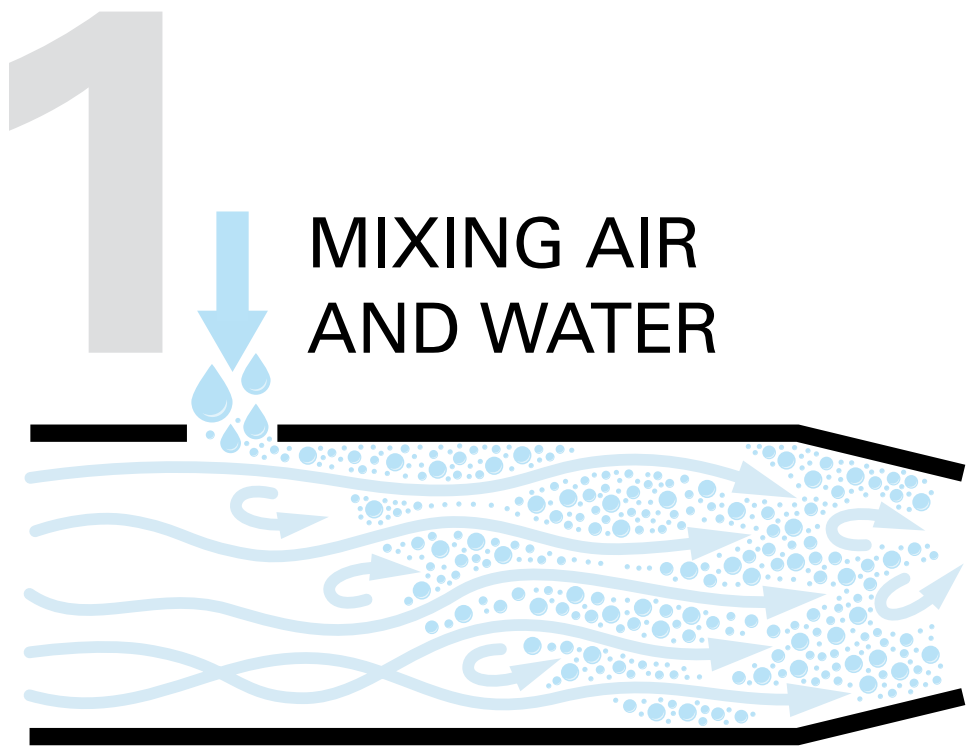


AquaTYPHOON™

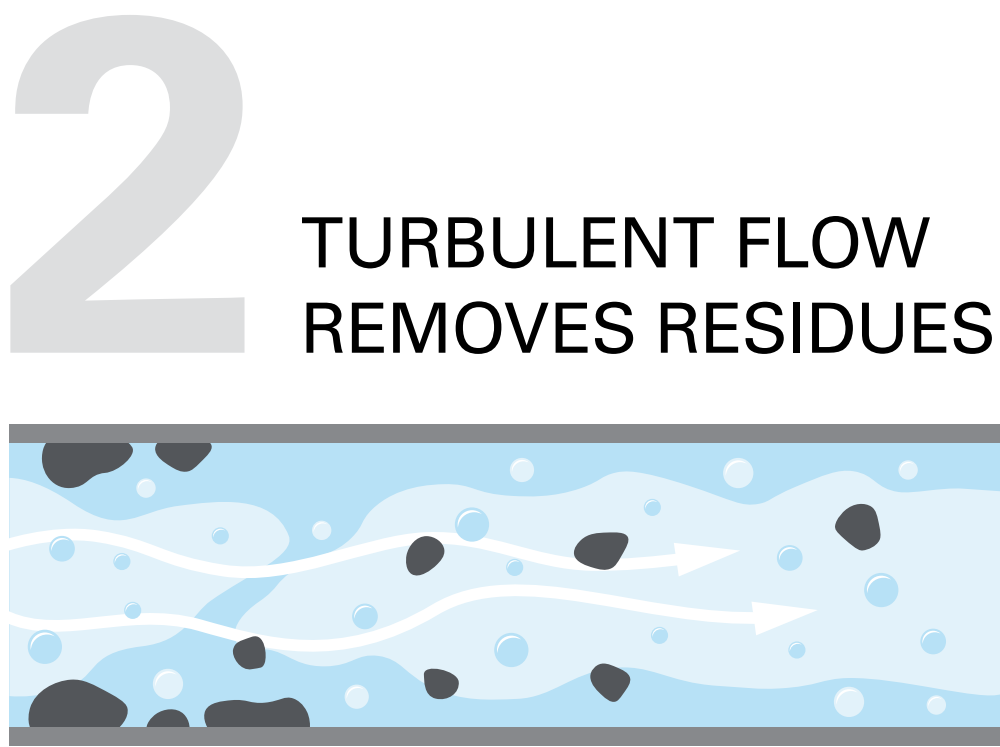
Smart technology effectively removes residues



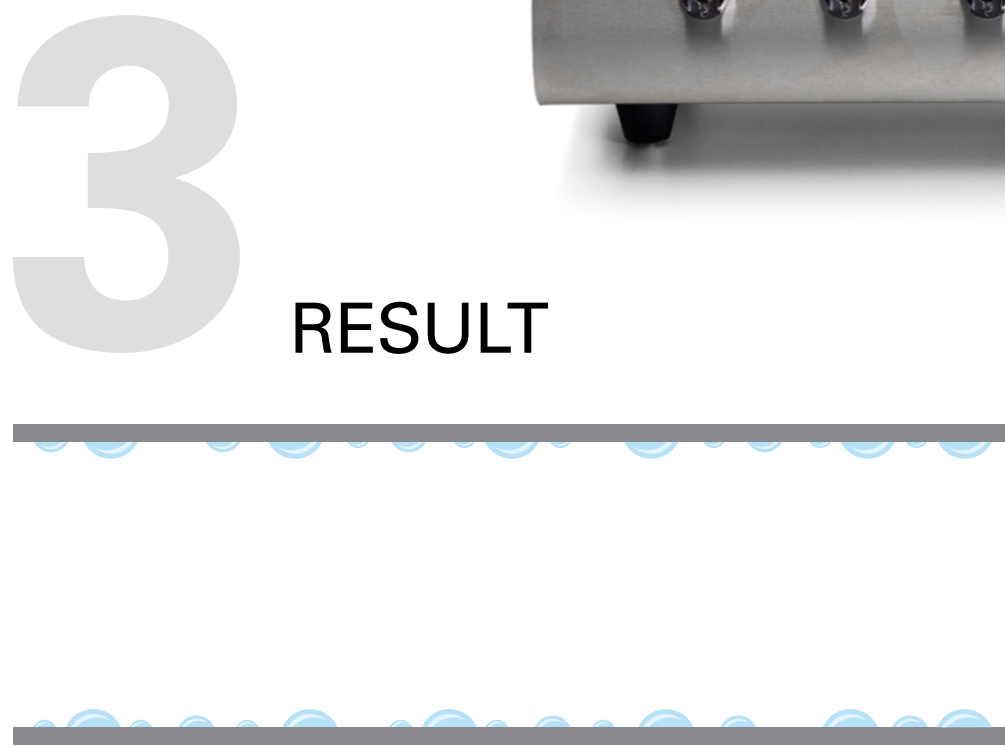
The AquaTYPHOON technology combines only air and water in the fully automated process for brushless pre-cleaning of all endoscope channels, even the non-brushable ones.



In the AquaTYPHOON, water is introduced in a pulsed manner into the turbulent flow of medical air.



In the endoscope, highly turbulent two-phase fluid flow creates a strong shear stress that eliminates residues from the channel walls.



Afterwards, the endoscope channel is free of residues.

AquaTYPHOON™

Pre-cleaning has never been so safe and easy



Step-by-step instructions on the touchscreen guide the operator through the entire process.

Intuitive software makes the process safe and simple.

Visual guidance and colour-coded tubing improve process flow.



AquaTYPHOON™

Built-in safety features and traceability

The AquaTYPHOON uses an automatic standardized process that helps preventing human errors and increases patient safety:

- **Automated device** with built-in validation and integrated alarms
- **Full traceability** with both printed and digital audit-ready data-records
- **Connection** to hospital network and data management systems for centralized traceability

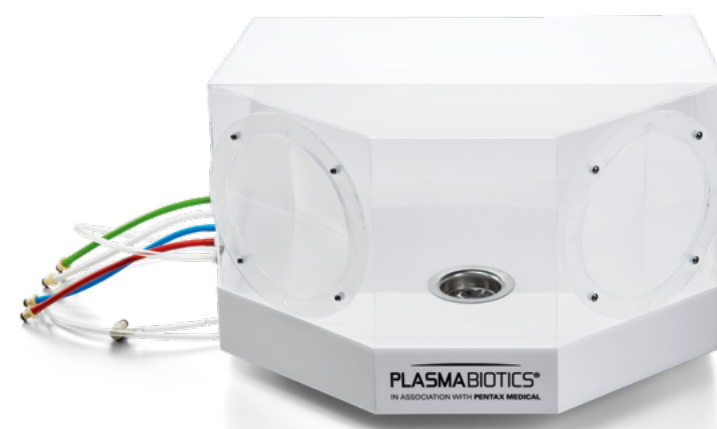


AquaTYPHOON™

Optimal splash protection with AquaBOX

The AquaBOX is an optional accessory that helps prevent splashing with contaminated water:

- **Practical addition**
It is placed in the sink and comes with height-adjustable feet and draining tube.
- **Connected to AquaTYPHOON**
via tube connectors that can be led out to the left or right side of the box, allowing for flexible setup.
- **Hand ports for easy access,**
allowing for ergonomic handling during the entire process.



AquaTYPHOON™

Caring for the environment


PENTAX Medical supports the UN Sustainability Development Goals. AquaTYPHOON is one example of our continuous journey to sustainability:



AquaTYPHOON reduces water consumption compared to standard manual pre-cleaning procedures.



The pending patent process uses water and air only, which **eliminates the need for chemical detergents** as well as **single-use brushes, syringes and other waste.**



70–89%
less water
consumption¹⁾



> 99%
waste
reduction²⁾

1) Evaluated in internal tests against standard manual pre-cleaning procedures.

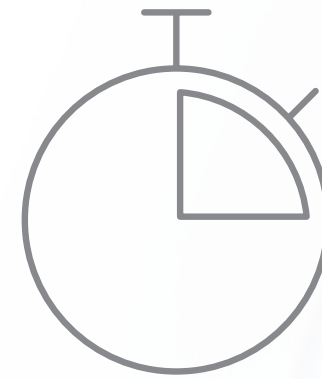
2) Calculated with 1 filter exchange annually with AquaTYPHOON (= 510 g waste) compared to more than 861 kg waste (single-use syringes, brushes, etc.) in standard manual pre-cleaning.

AquaTYPHOON™

A truly economical solution



Reduce reprocessing costs by minimising labour time and water consumption while eliminating the need for single-use cleaning consumables and detergents.



Make endoscopes operational faster, allowing for more procedures and increased hospital efficiency and productivity.



Simplify reprocessing, as AquaTYPHOON is applicable to all endoscope types and brands.

References

What experts say about the system



“The AquaTYPHOON automates the pre-cleaning process and enables full traceability. Pre-cleaning endoscopes with the AquaTYPHOON system saves time and improves efficiency. This way, it helps us reduce costs and waste while simplifying the procedures for our staff.

The process fulfills all conditions for an endoscopy unit to engage into an eco-responsible approach, an essential criterion nowadays in the organization of the healthcare services.”

Françoise Mével, Senior Health Executive,
European Hospital Georges
Pompidou, Paris, France

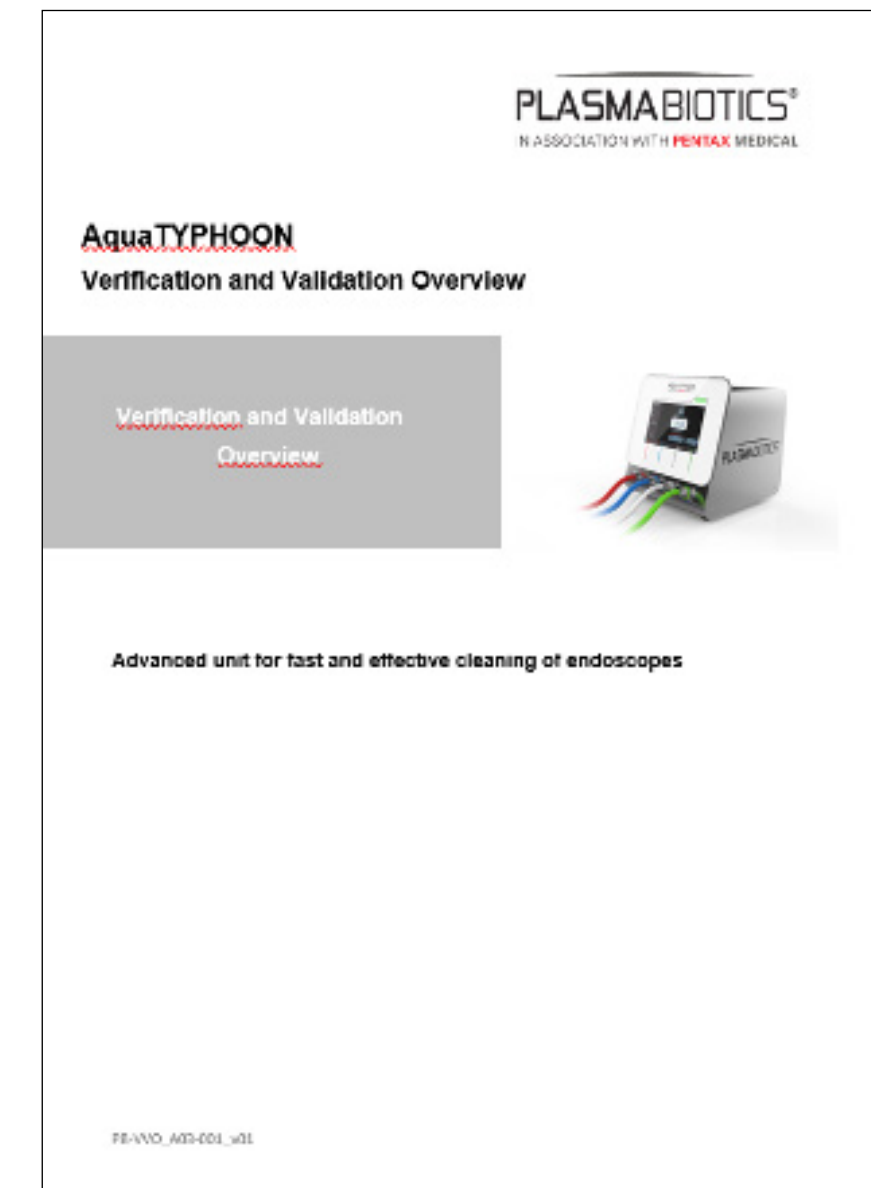
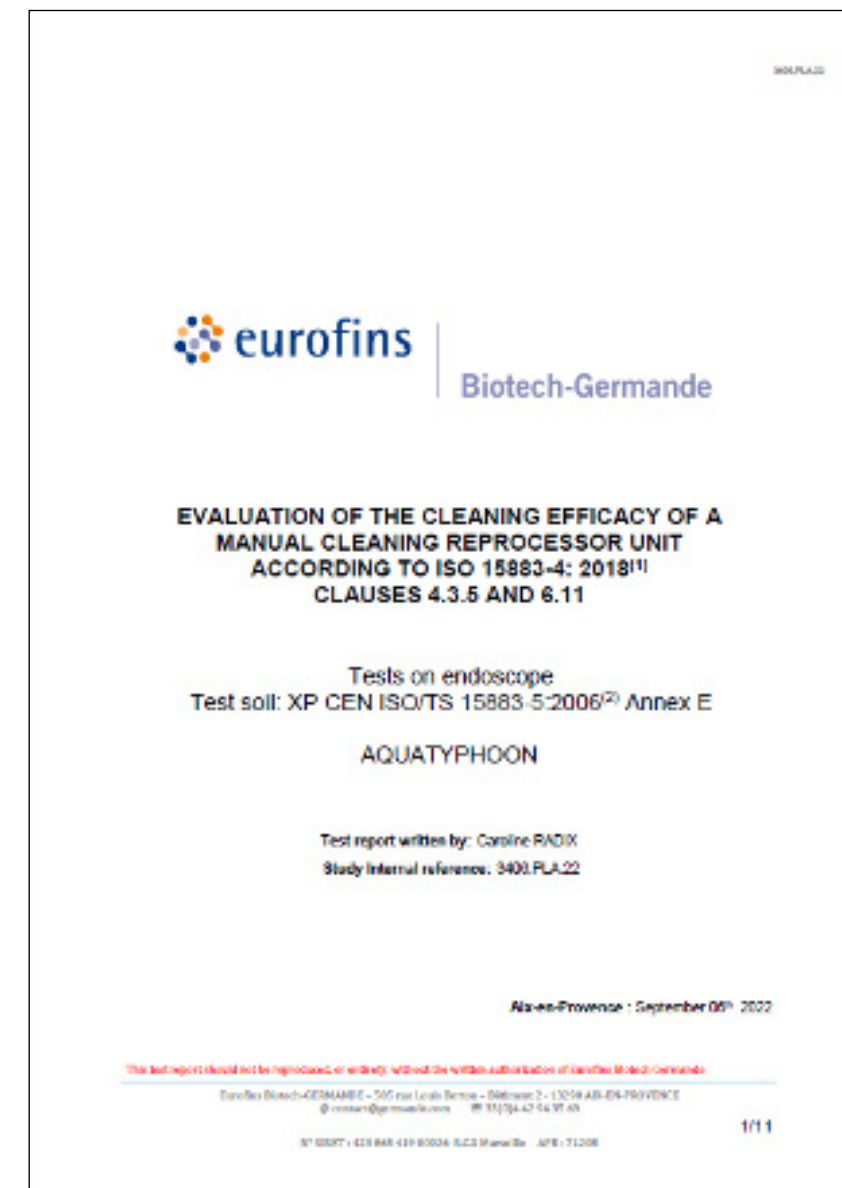
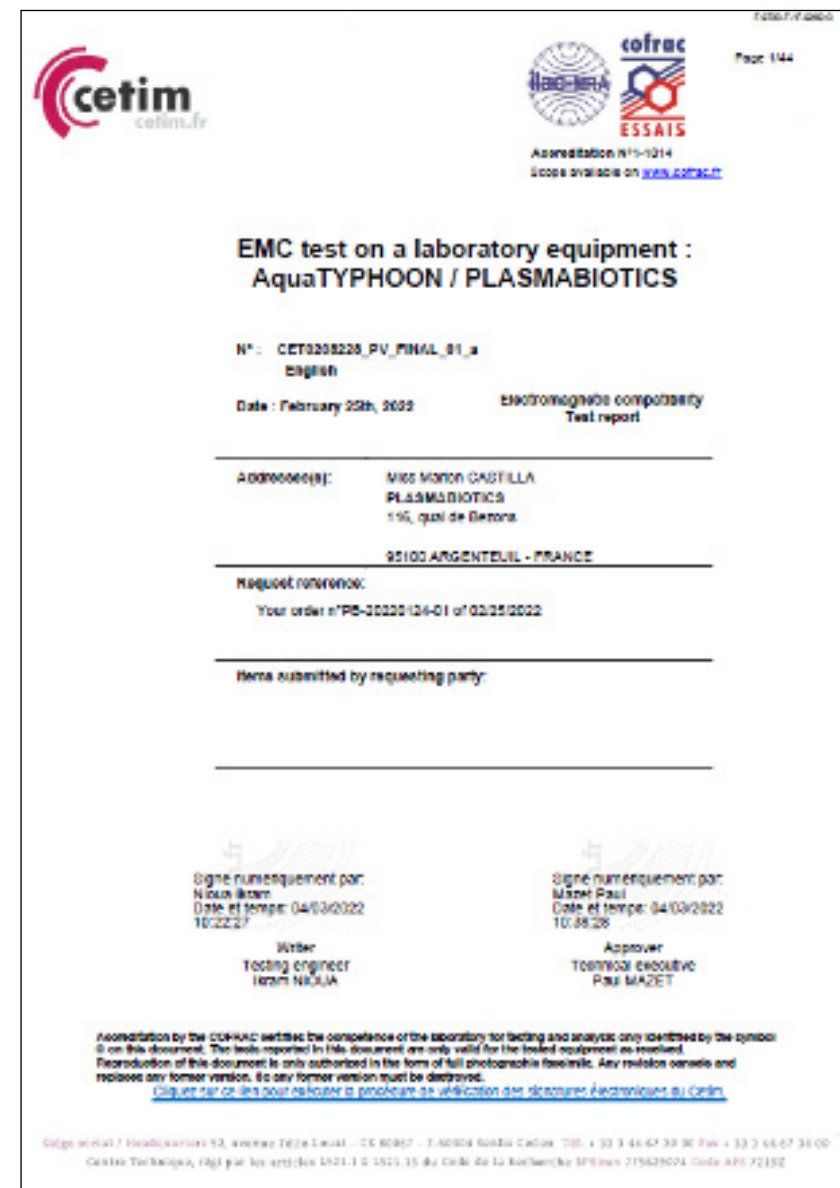
References

Independently tested



The AquaTYPHOON system has been thoroughly tested by independent laboratories having Cofrac accreditation, as well as clinically validated at several pilot sites. The system is certified to comply with the following regulation and standards:

- Regulation (EU) 2017/745 on medical devices**
- IEC 61010-1: 2017**
- IEC 61326-1: 2021**
- EN ISO 15883-4: 2018**
- EN ISO 15883-5: 2021**
- EN ISO 15223-1: 2021**



Technical Data Specifications



AquaTYPHOON

PARAMETERS	VALUES
Power supply/electrical network	100–240V
Frequency	50/60 Hz
Dimensions (L x W x H)	300x280x260 mm
Maximal power	100W
Net weight	10.7 kg
Minimal air inlet pressure	3 bar
Minimal gas flow rate	70l/min
Minimal water inlet pressure	3 bar



Technical Data

Time-saving pre-cleaning for all major endoscope brands



The system is fully compatible with endoscopes from all major manufacturers and endoscope channels pre-cleaning times are significantly reduced.

ENDOSCOPIC DEVICES	AUTOMATED PRE-CLEANING TIME
EBUS, bronchoscopes, naso-laryngoscopes, cystoscopes, ureteroscopes	2 min
Gastrointestinal (GI) endoscopes	5 min
EUS endoscopes, twin channel GI endoscopes	7 min



PENTAX Medical Triple Aim



Our **Triple Aim** program is designed to deliver on our commitment to support you and your healthcare organisation’s wider objectives by providing programs, products and solutions to help you reach your goals.

AquaTYPHOON improves hygiene and patient safety by reducing the risk of infection. As an alternative to manual pre-cleaning, this device automatically cleans all endoscope channels, including the non-brushable ones. Based on pending patent brushless technology using only air and water, it effectively removes residues from endoscope channels.



Reprocessing with AquaTYPHOON requires less labour and time, which increases productivity. Compared to manual pre-cleaning, it eliminates waste (brushes, syringes and detergent) and reduces water consumption. This allows for significantly lower costs and increases sustainability.

As an automated device, it has built-in validation and safety features that help preventing human errors. It increases efficiency by reducing channel cleaning time to just 2–7 minutes, depending on endoscope type. The system offers full traceability and can be connected to hospital networks.

At a glance AquaTYPHOON™

AquaTYPHOON



Increased hygiene and patient safety by effective removal of residues from all endoscope channels, even the non-brushable ones.



Boosting efficiency in reprocessing by saving time and reducing costs.



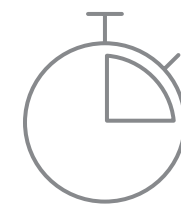
Automatic validation and integrated alarms help preventing human errors and enhance safety.



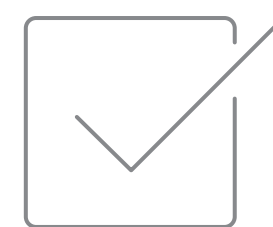
Highly sustainable due to low water consumption.

Practical accessories to prevent splashing with contaminated water.

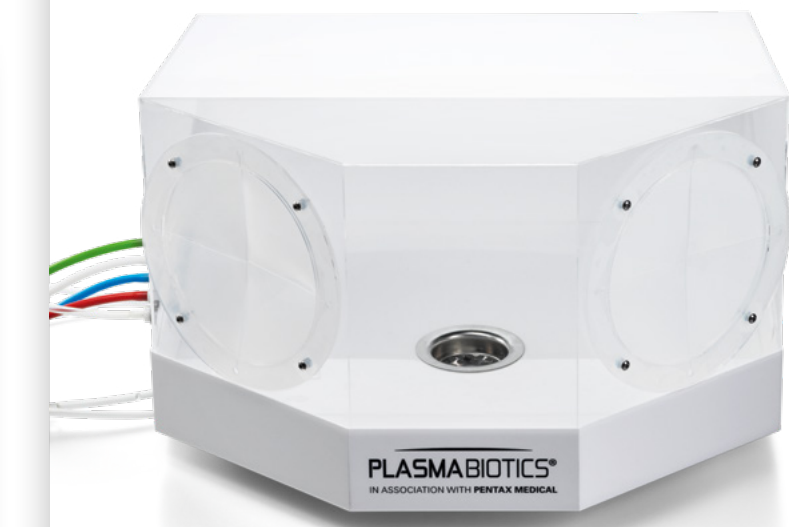
Automated brushless channels pre-cleaning for all endoscope types and brands in just 2–7 minutes.¹⁾ This helps reducing wait times between procedures.



Full traceability and connection to hospital network.



Environmentally friendly thanks to radical elimination of waste and chemicals, compared to manual pre-cleaning procedures.



AquaBOX



1) See Technical Data section

At a glance

The smart reprocessing team for enhanced hygiene and patient safety

By effectively removing residues from endoscope channels, drying channels thoroughly and storing devices safely, the complete system reduces the risks of cross-contamination and infections. These automated processes have implemented validation, security systems, full traceability, and are more efficient and sustainable than standard procedures.

AquaTYPHOON



Automated brushless channels pre-cleaning for all endoscope types and brands in just 2–7 minutes.¹⁾

PlasmaTYPHOON+



Ultra-fast and complete channels drying for all types of endoscopes in just 1–3 minutes.¹⁾

PlasmaBAG ECO



Safe long-term storage of ready-to-use endoscopes for up to 31 days.²⁾ Individual zero energy storage, without capacity limit.

1) See Technical Data section

2) Validated for up to 744 storage hours (31 days) according to NF EN 16442 norm. The maximum storage time may be subject to local regulations on endoscope storage.

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At a glance



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CE Medical device class I
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