

# REDUCE ENDOSCOPE DRYING AND STORAGE TO JUST 1–3 MINUTES

Hygiene in  
Reprocessing

Plasma  
TYPHOON+

PlasmaBAG

References

Technical  
Data

Triple Aim

**PLASMATYPHOON+**  
POWERED BY **PENTAX** MEDICAL

Boosting endoscope reprocessing  
to enhance patient safety  
and hospital efficiency

At a glance



What's new?



# Hygiene is essential for patient safety



PENTAX Medical strives to continuously improve patient safety and infection prevention in endoscopy. That's why we revolutionised endoscope reprocessing procedures to achieve three major goals:



To enhance **patient safety** by reducing the **risk of infection**.



To **boost efficiency** and **reduce wait times** between procedures.



To **maximise hospital productivity** in endoscope reprocessing.



PlasmaTYPHOON™+ and PlasmaBAG™ system

# The fastest endoscope drying and storage, ever



Ask your reprocessing staff:  
PlasmaTYPHOON+ and PlasmaBAG  
system dries and stores endoscopes  
faster than any other system, ever.

- **Ultra-fast and complete drying**  
in just 1 to 3 minutes<sup>1)</sup>
- **Ultra-fast storage**  
in just 5 seconds<sup>1)</sup>



1) see technical data section



PlasmaTYPHOON+ and PlasmaBAG system

# Small dimensions – unlimited capacity



PlasmaTYPHOON+  
for complete drying  
in just 1 to 3 minutes<sup>1)</sup>

Barcode  
scanner

RFID  
scanner

Airgun

Label printer  
for full  
traceability

PlasmaBAG  
offers safe storage  
for up to 31 days<sup>2)</sup>



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.

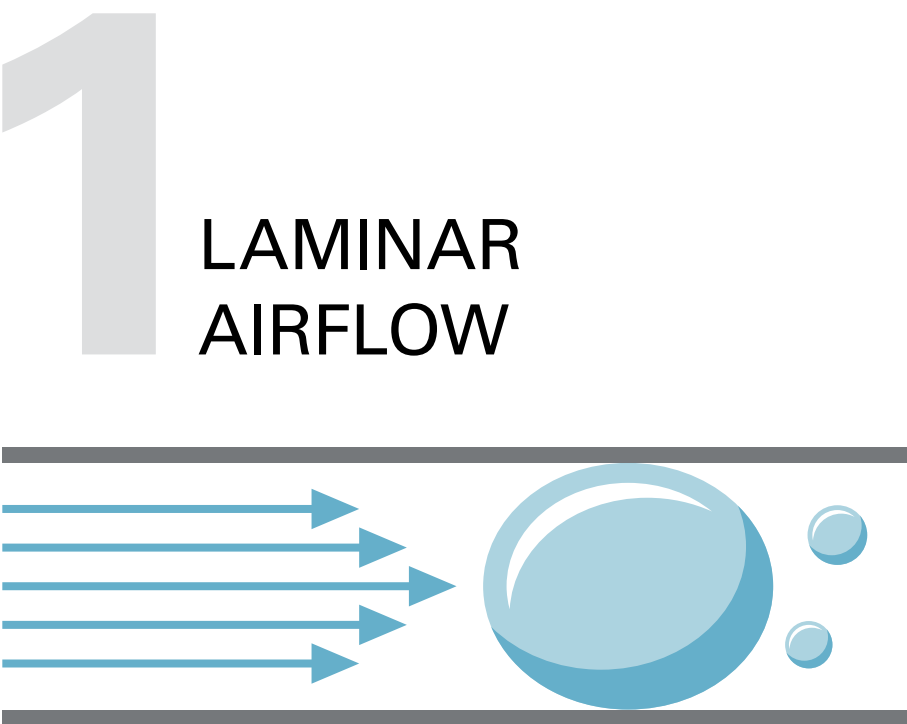


PlasmaTYPHOON+

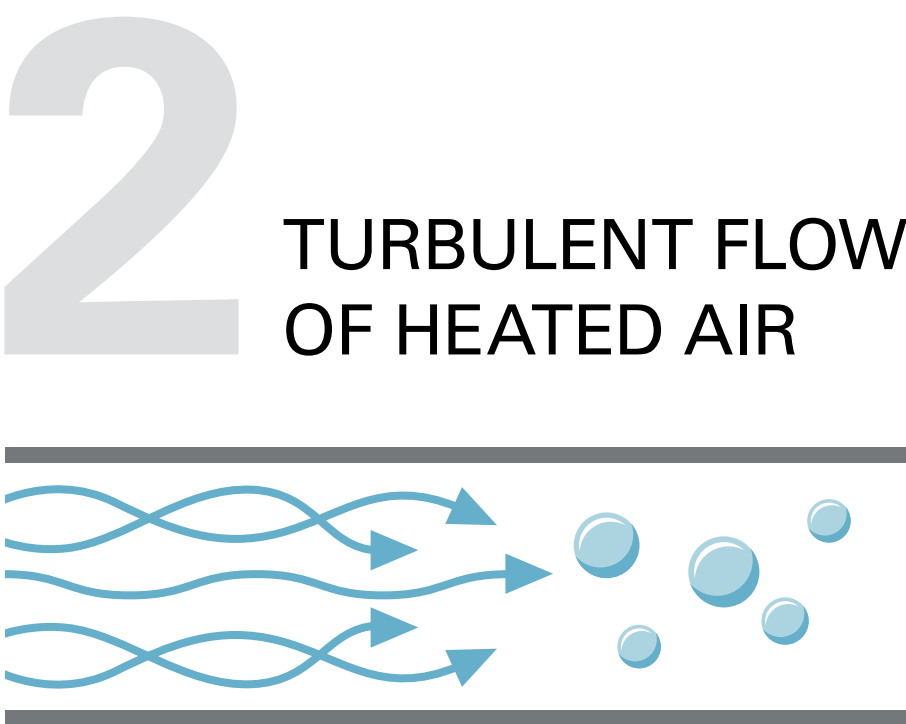
# Reduces drying times from hours to minutes



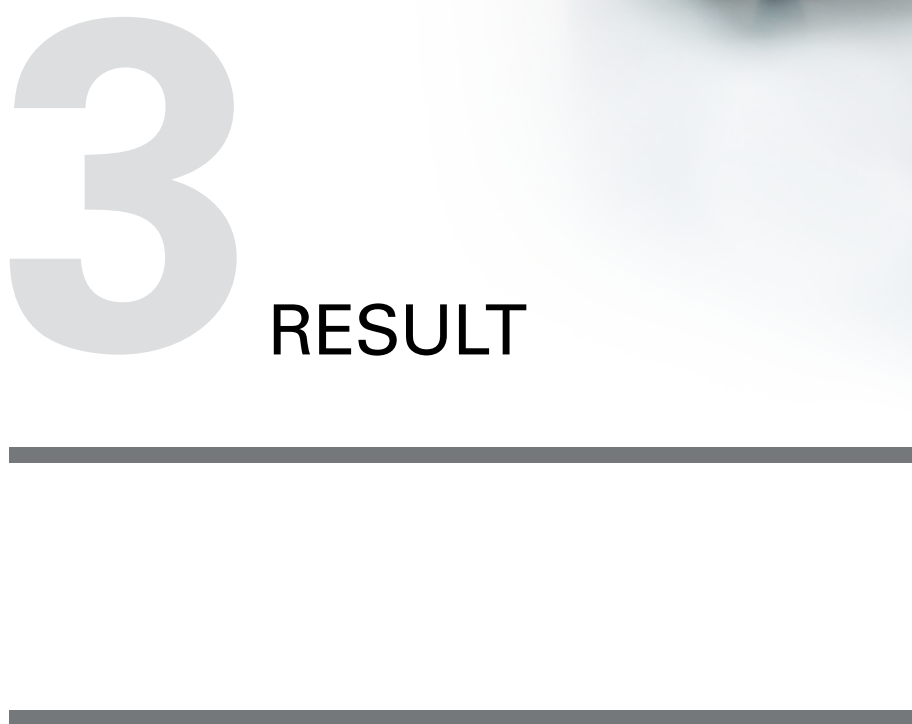
A specific airflow process ensures each individual endoscope channel is perfectly dried:



Eliminates most of the residual fluid in the channels



Evaporates the remaining droplets on channel walls



Produces perfectly dried channels





PlasmaTYPHOON+

# Making reprocessing procedures easier and safer



Handling is optimised to make daily routines simpler:

**Intuitive software**  
guides procedure  
flow on a touch  
screen interface



**Visual guidance and  
colour-coded tubing**  
improve process flow



PlasmaTYPHOON+

# Full-blown attention for every move



PlasmaTYPHOON+ provides additional support and safety in daily processes:

- **Automatic validation**  
with integrated alarms
- **Full traceability**  
with both printed and digital  
audit-ready data-records
- **Connection** to hospital network  
and data management systems  
enables drying and storage  
cycles to be linked to patient data





PlasmaBAG

# Safe, mobile, and space saving storage



PlasmaBAG offers you safe and active endoscope storage with many benefits:

- **Prevents infection risks** upon storage and transportation
- **Maintains disinfected state** of endoscopes upon storage for up to 31 days<sup>1)</sup>
- **Labelled for traceability** and safety check support
- **Certified sustainability** made with 80% recycled Polyethylene, holding the German eco label 'Blue Angel' (PlasmaBAG ECO)



- **Allows safe transportation** of endoscopes from centralised reprocessing centers to satellite locations
- **Space saving storage** of ready-to-use endoscopes with no restriction on the number able to be stored
- Ensuring endoscopes are **available anytime, anywhere**

<sup>1)</sup> 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.

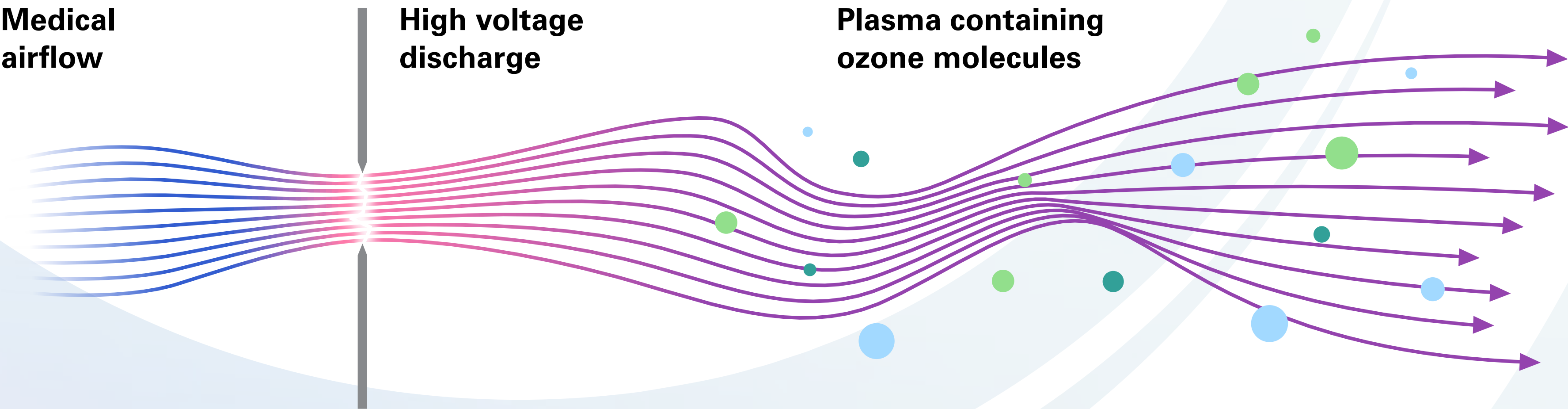


PlasmaBAG

# Sustaining the disinfected state with plasma



After the completely dried endoscope has been placed in the PlasmaBAG, the bag is insufflated with plasma containing ozone molecules. In conjunction with complete drying, the active storage environment in the PlasmaBAG ensures the disinfected state of the endoscope is maintained for up to 31 days<sup>1)</sup>.



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PlasmaBAG

# Caring for environment



PENTAX Medical aims to support the UN Sustainability Development Goals. PlasmaBAG is one example of our continuous journey to sustainability:



**Carbon emissions in production are compensated** for with a [reforestation project in Togo](#)<sup>1)</sup>, making PlasmaBAG carbon neutral.



**PlasmaBAG ECO™**, the latest generation PlasmaBAG™, is produced with 80% recycled Polyethylene, holding the German eco label 'Blue Angel'.

171

trees planted<sup>2)</sup>  
for PlasmaBAGs  
in Q3 + Q4 2021

57 t

CO<sub>2</sub> compensated<sup>2)</sup>  
for in Q3 + Q4 2021



[www.blauer-engel.de/uz30a](http://www.blauer-engel.de/uz30a)



1) Until 2021, Project Togo has planted more than 1,500,000 new trees in total, binding approx. 400,000 tons of atmospheric carbon annually. [www.natureoffice.com/en/carbon-offset-projects/project-togo](http://www.natureoffice.com/en/carbon-offset-projects/project-togo)  
2) Equivalent trees and compensated volume of carbon according to calculation of L.E.S.S. FRANCE





PlasmaTYPHOON+ and PlasmaBAG system

# What experts say about the system



Prof. Rocco Trisolini – Head of the  
Interventional Pulmonology Unit  
Policlinico Universitario Agostino Gemelli  
Rome, Italy

“The PlasmaTYPHOON+ is the perfect compact solution for us, contributing to an overall reduction in time, cost and space needed. Being able to store the endoscope in the PlasmaBAG for up to 31 days, the endoscope is ready to use for our patients at any time.”



Anne Hillion – Health executive  
for GI endoscopy & pulmonology  
Hôpital Européen Georges Pompidou,  
Paris, France.

“Since we have had the PlasmaTYPHOON+ and PlasmaBAG system, we have not only improved our reprocessing efficiency but also the hospital efficiency. With the improved endoscope turnover, we are able to reduce waiting times between procedures and therefore schedule more patient procedures.”



Patrizia Porta – Head Nurse  
Policlinico Universitario Agostino Gemelli,  
Rome, Italy

“With PlasmaTYPHOON+ and PlasmaBAG, we can guarantee the safety of each patient in bronchoscopy. The PlasmaTYPHOON+ completely dries the scope and the PlasmaBAG provides a safe environment for endoscope storage and transport after reprocessing.”



PlasmaTYPHOON+ and PlasmaBAG system

# What experts say about the system



Marion Peukert – Nursing Director  
Endoscopy Unit, Stauferklinikum,  
Schwäbisch-Gmünd, Germany

“Fast and efficient endoscope drying, contamination proof storage as well as documented evaluation are very important to us. PlasmaTYPHOON+ meets all these requirements. A high hygiene standard brings safety for our patients – and peace of mind for us!”



Danilo Fabretti – Reprocessing Operator  
Policlinico Universitario Agostino Gemelli,  
Rome, Italy

“The system of PlasmaTYPHOON+ and PlasmaBAG gives us confidence to reduce the risk of infection for our patients. We are now able to transport the endoscope in the Plasma-BAG from the reprocessing room to endoscopy suite without risk of recontamination.”




# PlasmaTYPHOON+ and PlasmaBAG system Independently tested



PlasmaTYPHOON+ and PlasmaBAG have been thoroughly tested by **Eurofins Biotech Germande Laboratory** having Cofrac accreditation.

The system is certified to comply with the **EN 16442 standard** for drying and storage of flexible endoscopes, contributing to improved hygiene and patient safety.



Biotech-Germande

EVALUATION OF THE EFFICACY OF A DRYING UNIT FOR  
INTERNAL CHANNELS OF ENDOSCOPES  
BASED ON NF EN 16442<sup>(1)</sup>  
(CLAUSES 4.3 AND 6.4.4)

PlasmaTYPHOON+ (PLASMABIOTICS)

Test report written by: Caroline RADIX  
Study internal reference: 2904.PLA.19

This document supersedes the previous version 2904.PLA.19.1 edited on February 04th 2020


Marseilles: August 07th 2020

This test report concerns only the product tested

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Eurofins Biotech-Germande

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Siège social : 183 avenue de Luminy, Parc scientifique de Luminy Case 927, 13288 Marseille Cedex 9 - T : +33 (0) 4 91 82 82 40



Biotech-Germande

INFLUENCE OF A DRYING PROCESS ON THE EVOLUTION  
OF THE MICROBIOLOGICAL QUALITY OF INTERNAL  
CHANNELS OF ENDOSCOPES

PlasmaTYPHOON+ (PLASMABIOTICS)

Test report written by: Caroline RADIX  
Study internal reference: 2904.PLA.19

This document supersedes the previous version 2904.PLA.19.2 edited on February 04th 2020


Marseilles: August 07th 2020

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Biotech-Germande

EVALUATION OF THE ABILITY OF A DRYING AND  
STORAGE SYSTEM TO MAINTAIN THE MICROBIOLOGICAL  
QUALITY OF HEAT SENSITIVE ENDOSCOPES ACCORDING  
TO A TEST METHOD BASED UPON NF EN 16442<sup>(1)</sup>

PlasmaTYPHOON + (PLASMABIOTICS)

Test report written by: Caroline RADIX  
Study internal reference: 2907.PLA.19

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IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT  
(IECEE) CB SCHEME

Ref. à Cert. N°  
FR37001A1


CB TEST CERTIFICATE

Product	Plasma unit for fast drying and active storage of endoscopes
Name and address of the applicant	PLASMABIOTICS 116 Quai de Bezonis 95106 ARGENTEUIL Cedex France
Name and address of the manufacturer	PLASMABIOTICS 116 Quai de Bezonis 95106 ARGENTEUIL Cedex France
Name and address of the factory	<input type="checkbox"/> Additional information on page 2 PLASMABIOTICS 116 Quai de Bezonis 95106 ARGENTEUIL Cedex France
Notes: When more than one factory, please report on page 2	
Ratings and principal characteristics	100-240V~ 50/60Hz
Trademark (if any)	PLASMABIOTICS
Customer's Testing Facility (CTF) Stage used	
Model / Type Ref.	TYPHOON+
Additional information (if necessary may also be reported on page 2)	<input type="checkbox"/> Additional information on page 2 This is an administrative modification of the original FR37001 certificate that has been issued on the 23rd of September 2020. The modification deals with a typo error about the product reference. IEC 61010-1:2010/AAMD1:2016 National differences: EU Group Differences, CA, US Comments: No CH, JP declared national differences for this standard P302378-DEC4
A sample of the product was tested and found to be in conformity with	
As shown in the Test Report Ref. No. which forms part of this Certificate	

This CB Test Certificate is issued by the National Certification Body

Laboratoire National de Métrologie et d'Essais (LNE)  
1 rue Gaston Boissier, FR-75724 Paris Cedex 15, France

CRÉER LA  
CONFIANCE



Date: 2020-10-21

Signature: Pascal Prod'homme

Signature numérique de  
PASCAL  
PROD'HOME  
Date: 2020-10-21  
08:30:25 +02'00'

page 1 of 1

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PlasmaTYPHOON+ and PlasmaBAG system

# Supports every department in your hospital or clinic

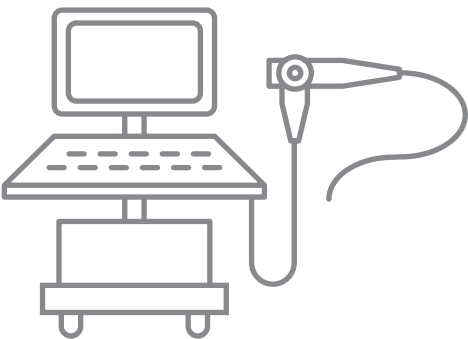


The system fulfills your departments’ needs and can help you increase hospital efficiency and productivity. With the PlasmaBAG ECO™, it offers physicians, nurses, reprocessing staff and hospital staff a solution that supports reaching your sustainability goals, as well:



## EMERGENCY ROOM AND ICU

Immediate access to ready-to-use endoscopes thanks to unlimited drying capacity and storage for up to 31 days<sup>1)</sup>



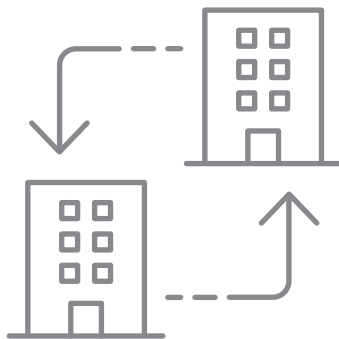
## ENDOSCOPY UNIT

Reduced waiting times between procedures thanks to improved endoscope turn-around time and no need to reprocess endoscopes again after storage



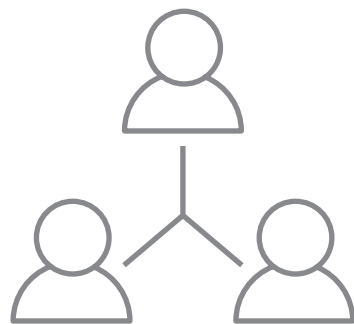
## REPROCESSING UNIT

Efficient workflows with seamless and fully traceable processes. Contribution to the sustainability goals using endoscope storage bags made of recycled material.



## SATELLITE CENTERS

Risk free transport between centralised reprocessing center and satellite locations such as Pulmonology, Cardiology, Urology, etc.



## HOSPITAL MANAGEMENT

Saving cost, space and time whilst increasing productivity. Achieving hospital's sustainability goals using PlasmaBAG ECO™ solution.

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The maximum storage time may be subject to local regulations on endoscope storage.



PlasmaTYPHOON+ and PlasmaBAG system

# Ultra-fast drying and storage times



The system is fully compatible with all major endoscope brands.

ENDOSCOPIC DEVICES	CYCLE TIME CHANNEL DRYING	CYCLE TIME STORAGE
Ureteroscope, cystoscope	1 min	5 s
Bronchoscope, ultrasound bronchoscope (EBUS), nasolaryngoscope	1 min 30 s	5 s
Gastroscope, duodenoscope, enteroscope, colonoscope	2 min 30 s	5 s
Gastrointestinal ultrasound endoscope (EUS)	3 min	5 s
Endoscopes without channels and transeophageal (TEE/TOE) ultrasound probes	-	5 s

PlasmaTYPHOON+ and PlasmaBAG system

Technical Data



PlasmaTYPHOON+

PARAMETERS	VALUES
Power supply/electrical network	110 – 240V
Frequency	50 / 60 Hz
Dimensions (L × W × H)	300 / 280 / 260 mm
Net weight	10.7 kg
Pressure of medical air at gas inlet	3 bar
Minimal gas flow rate	60l/min

PlasmaBAG and PlasmaBAG ECO

REFERENCE	DIMENSIONS	PACKAGING
Standard PlasmaBAG	600 × 500 mm	400 pcs
XL PlasmaBAG	700 × 640 mm	250 pcs
XXL PlasmaBAG	840 × 600 mm	300 pcs
PlasmaBAG ECO (Blue Angel certified)	620 × 520 mm	400 pcs





# 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.

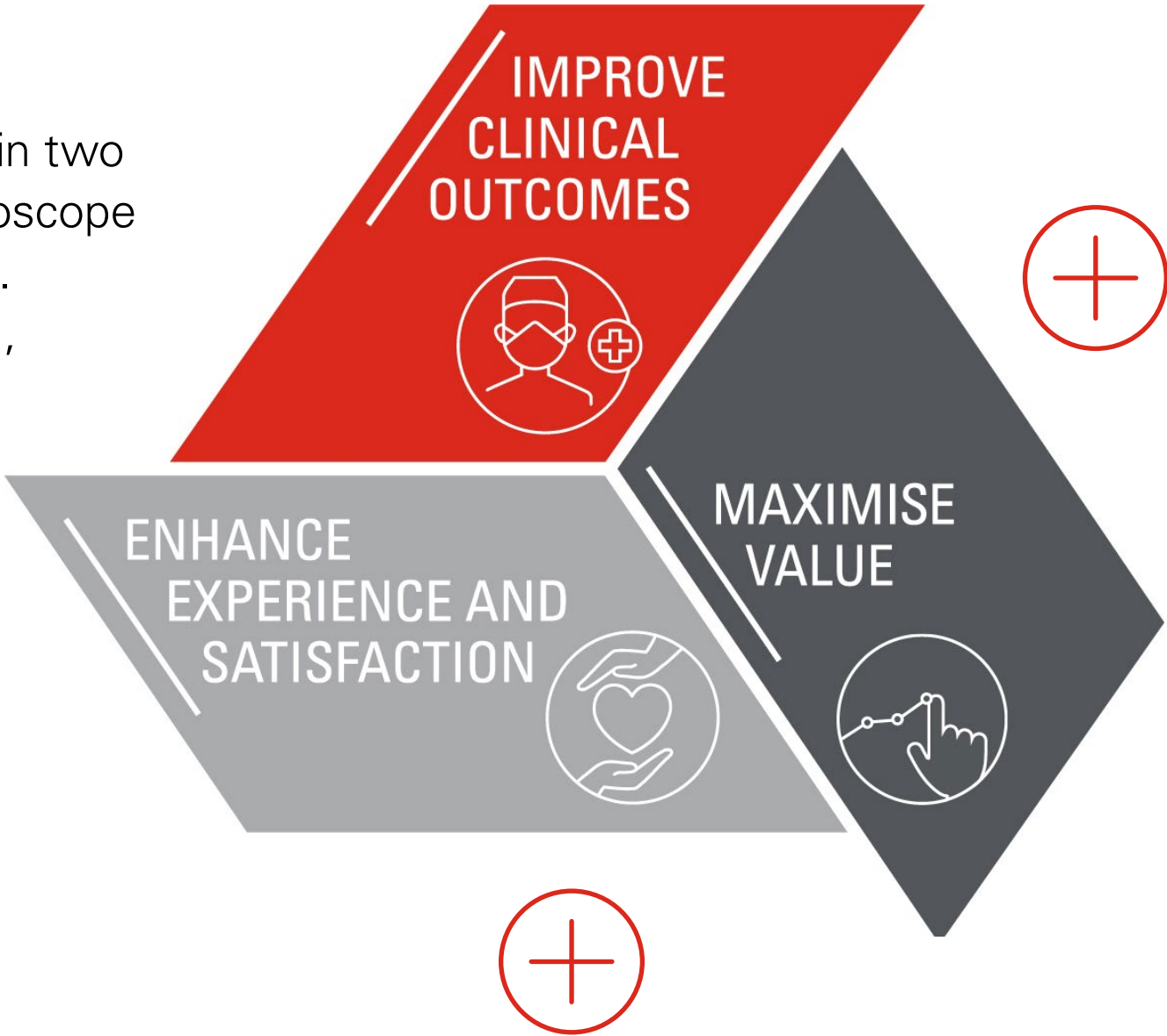


# PENTAX Medical Triple Aim



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.

**Enhancing hygiene and patient safety**  
The PlasmaTYPHOON+ and PlasmaBAG system helps reduce the risk of infection in two ways. It rapidly and thoroughly dries endoscope channels preserving the disinfected state. Through active storage in the PlasmaBAG, this state can be maintained for up to 31 days<sup>1)</sup>. This eliminates further risk of recontamination upon storage or transport.



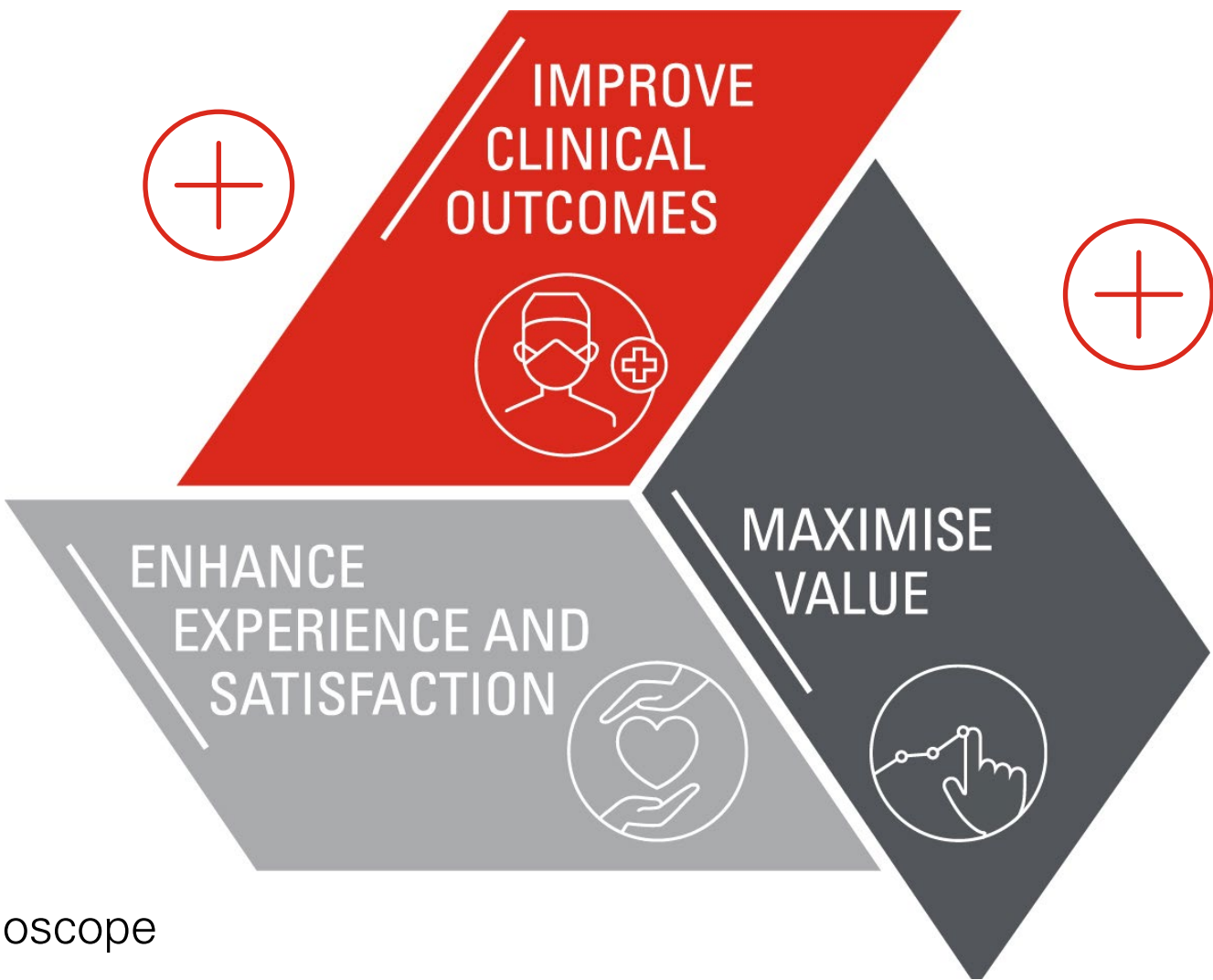
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The maximum storage time may be subject to local regulations on endoscope storage.



# 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.



**Boosting hospital efficiency and traceability**

The PlasmaTYPHOON+ greatly increases reprocessing efficiency and improves endoscope turnover, thereby reducing wait times between procedures, allowing for more patient treatments. The PlasmaBAG removes the need for additional reprocessing after storage and ensures the endoscopes are immediately available at the point of care, anywhere, anytime. Furthermore, the system provides full traceability and connectivity to hospital networks.

# 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.



**Maximising productivity in endoscope reprocessing**

PlasmaTYPHOON+ accelerates endoscope reprocessing by substantially reducing drying times from hours to just minutes. The small footprint required for endoscope drying and storage greatly reduces cost and space required. Overall, with its unlimited drying and storage capacity, ease of use, embedded automatic validation and enhanced intuitive touch panel, the PlasmaTYPHOON+ provides a seamless user experience and process control.



# PlasmaTYPHOON+ and PlasmaBAG system

## At a glance



PlasmaTYPHOON+

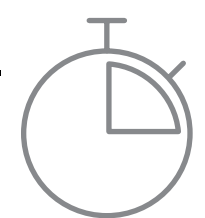
**Ultra-fast and complete drying** in just 1 to 3 minutes<sup>1)</sup>

**Full traceability** with both printed and digital, audit-ready data-records

**Automatic validation** with integrated alarms



**Reduced wait times** between procedures and after storage.



**Safe transportation** to make ready-to-use scopes available **anywhere, anytime.**



PlasmaBAG

**Sustainable solution,** certified eco-balance

**Safe storage** of ready-to-use scopes for up to 31 days<sup>2)</sup>

**Space saving storage** of endoscopes with no restriction on number

**Prevents infection risks** in storage and transport

1) see Technical Data section  
2) Validated for up to 744 storage hours (31 days) according to NF EN 16442 norm.  
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PlasmaTYPHOON+

# The PlasmaTYPHOON just got even better



What's new with our premium solution PlasmaTYPHOON+?



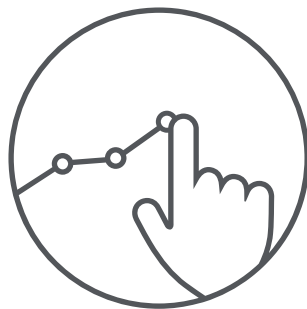
**Enhancing hygiene  
and patient safety**

Accelerated drying for EUS  
scopes in just 3 minutes



**Boosting hospital  
efficiency and traceability**

Full traceability and connectivity  
to hospital networks and data  
management systems



**Maximising productivity  
in endoscope reprocessing**

- Intuitive touch panel with  
guided process control
- Improved embedded automatic  
validation with integrated alarms
- Connector tubes can remain  
attached between drying and  
storage cycles, accelerating  
turnover time and reducing the  
need for additional maintenance



Inspired by  
#PENTAXMedicalTripleAim





Home

Hygiene in  
Reprocessing

Plasma  
TYPHOON+

PlasmaBAG

References

Technical  
Data

Triple Aim

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CE Medical device class I  
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