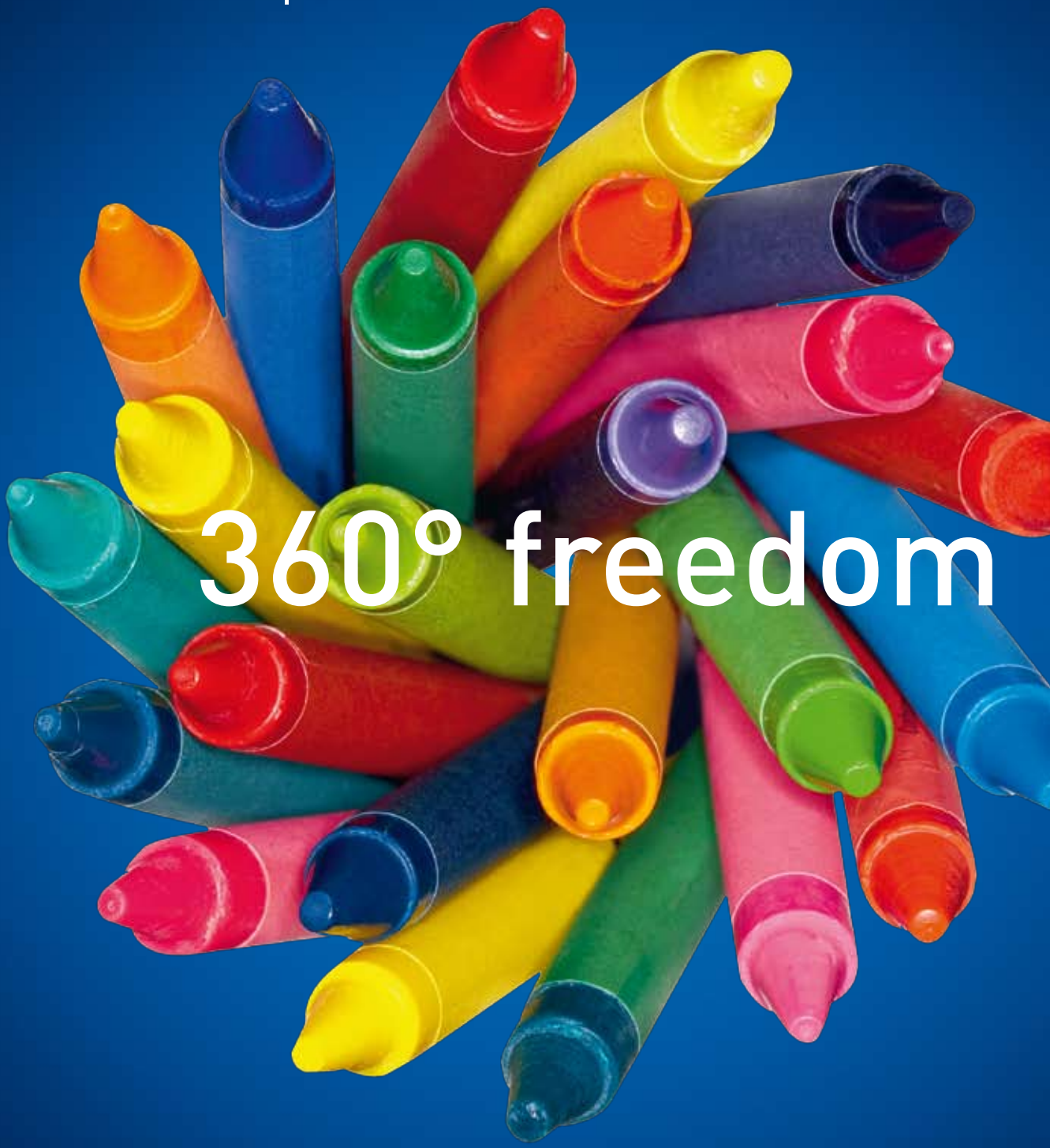
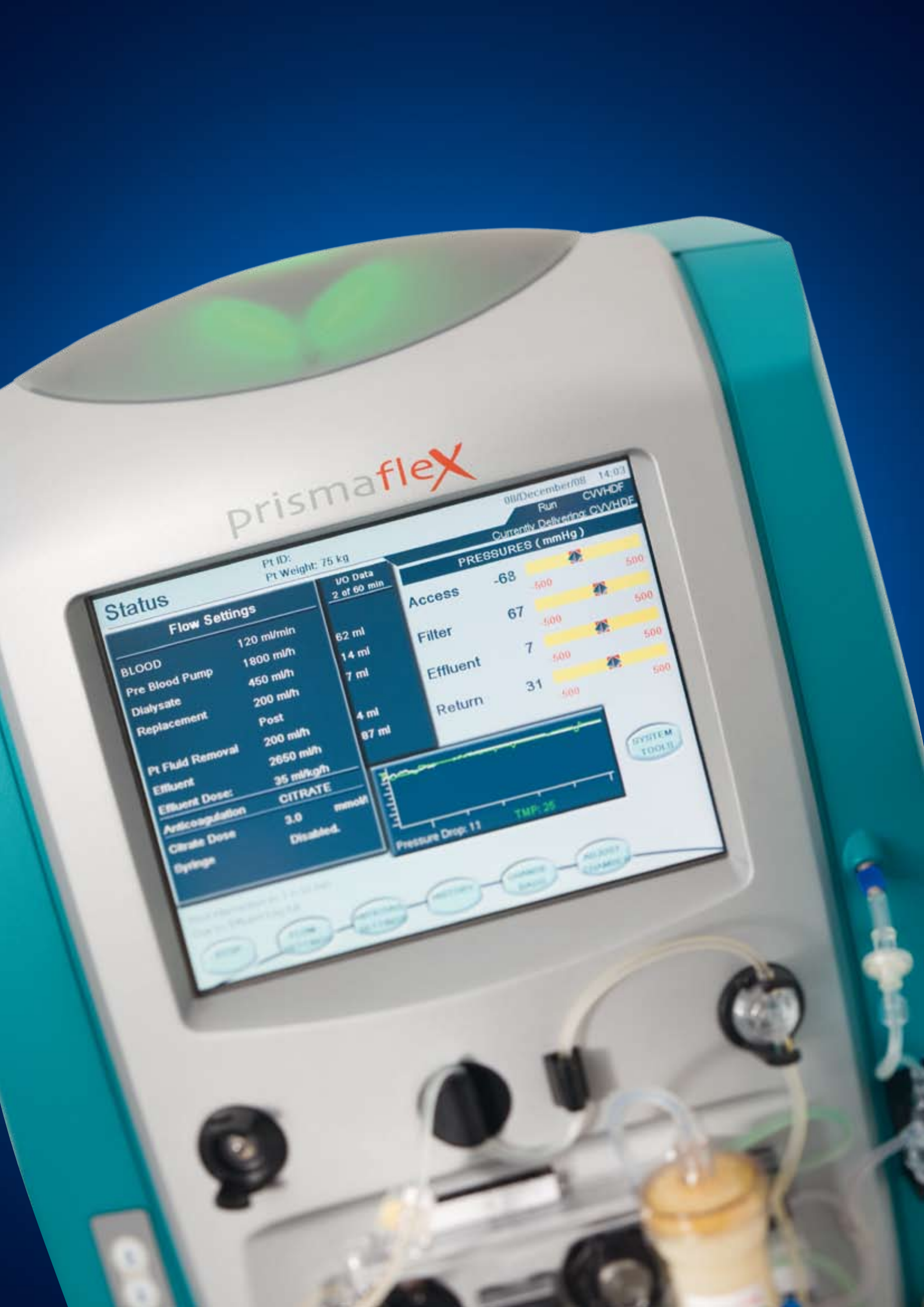
Open up unlimited options for continuous extracorporeal blood therapies



360° freedom

The PrismafleX eXeed™ system

GAMBRO®


prismaflex
Status
Pt ID:
Pt Weight: 75 kg
08/December/08 14:03
Run
CVVHDF
Currently Delivering: CVVHDF
Flow Settings
BLOOD 120 ml/min
Pre Blood Pump 1800 ml/h
Dialysate 450 ml/h
Replacement 200 ml/h
Post
Pt Fluid Removal 200 ml/h
Effluent 2650 ml/h
Effluent Dose: 35 ml/kg/h
Anticoagulation CITRATE
Citrate Dose 3.0 mmol/l
Syringe Disabled
I/O Data
2 of 60 min
62 ml
14 ml
7 ml
4 ml
87 ml
PRESSURES (mmHg)
Access -68
Filter 67
Effluent 7
Return 31
-500
500
Pressure Drop: 11
TMP: 25
SYSTEM TOOLS

Expand your possibilities for advanced extracorporeal blood purification

Innovation in therapies, quality of products and services, and co-operation based on partnership—these are the core values that drive Gambro's daily work. Our aim is to help you treat your patients and serve your intensive care unit (ICU) in the best possible manner.

As a result, we provide you with innovative solutions to improve blood purification for your patients.

The PrismafleX® system—flexibility is an integral part of the system

The PrismafleX® system offers a flexible selection of various individual treatments to meet your patients' needs.

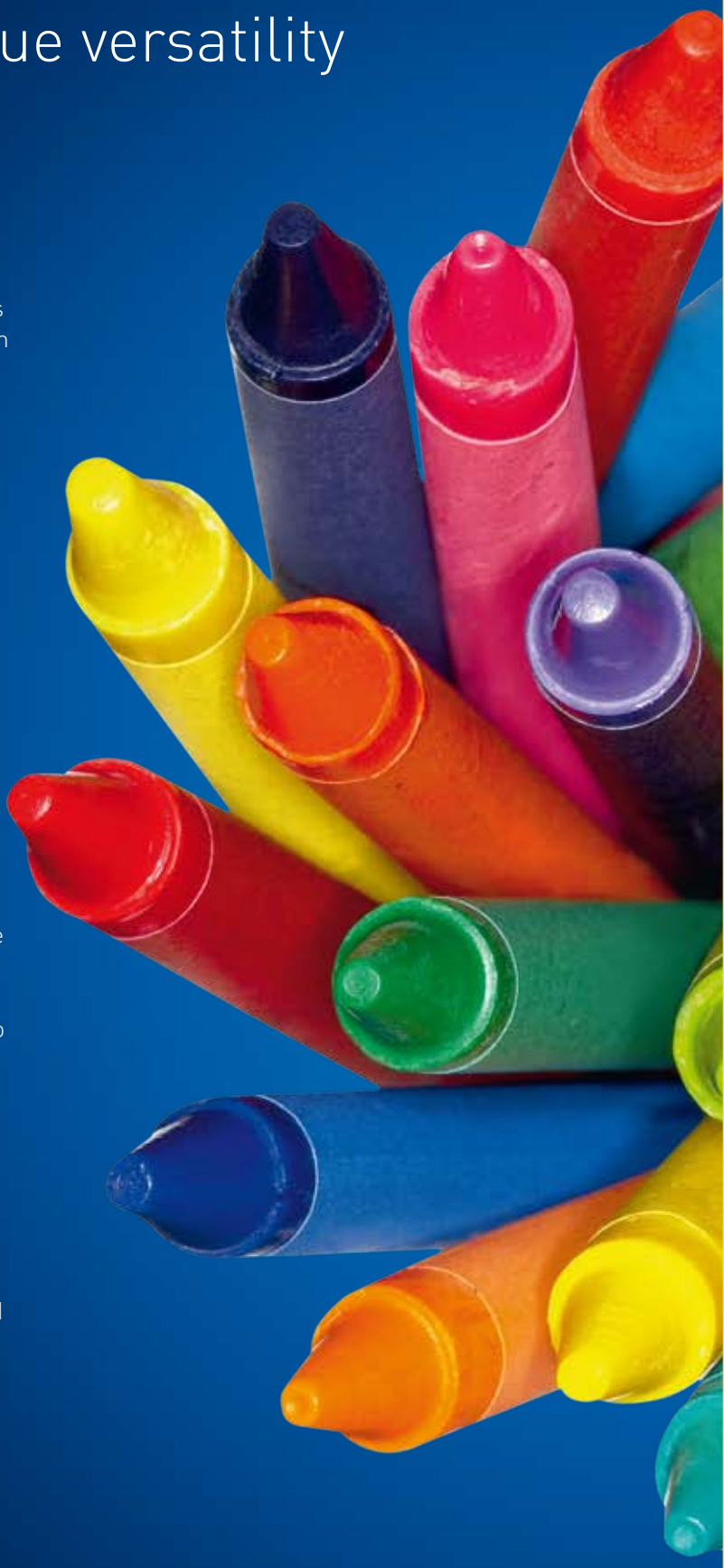
This multi-therapy platform enables all standard renal replacement therapies as well as innovative blood purification treatments.

Benefits of the PrismafleX system at a glance:

- Flexibility of choice: a single system for all main intensive care therapies
- Extenstive protocols: individually designed therapies suited to your patients' needs
- Ease of use: self-explanatory interactive user interface, user-friendly technique, and ergonomic handling
- Patient safety: well-balanced components, enhancing therapies through synergies

What does PrismafleX eXeed™ software give you and your therapy?

PrismafleX eXeed software—the therapy platform with unique versatility



Continuous renal replacement therapy (CRRT) is the main blood purification treatment performed in ICUs. Nowadays, advanced blood purification therapies are becoming increasingly important.

Discover the new versatile PrismafleX eXeed software

The polyvalent, multi-therapy platform has been designed especially for blood purification treatments in the ICU:

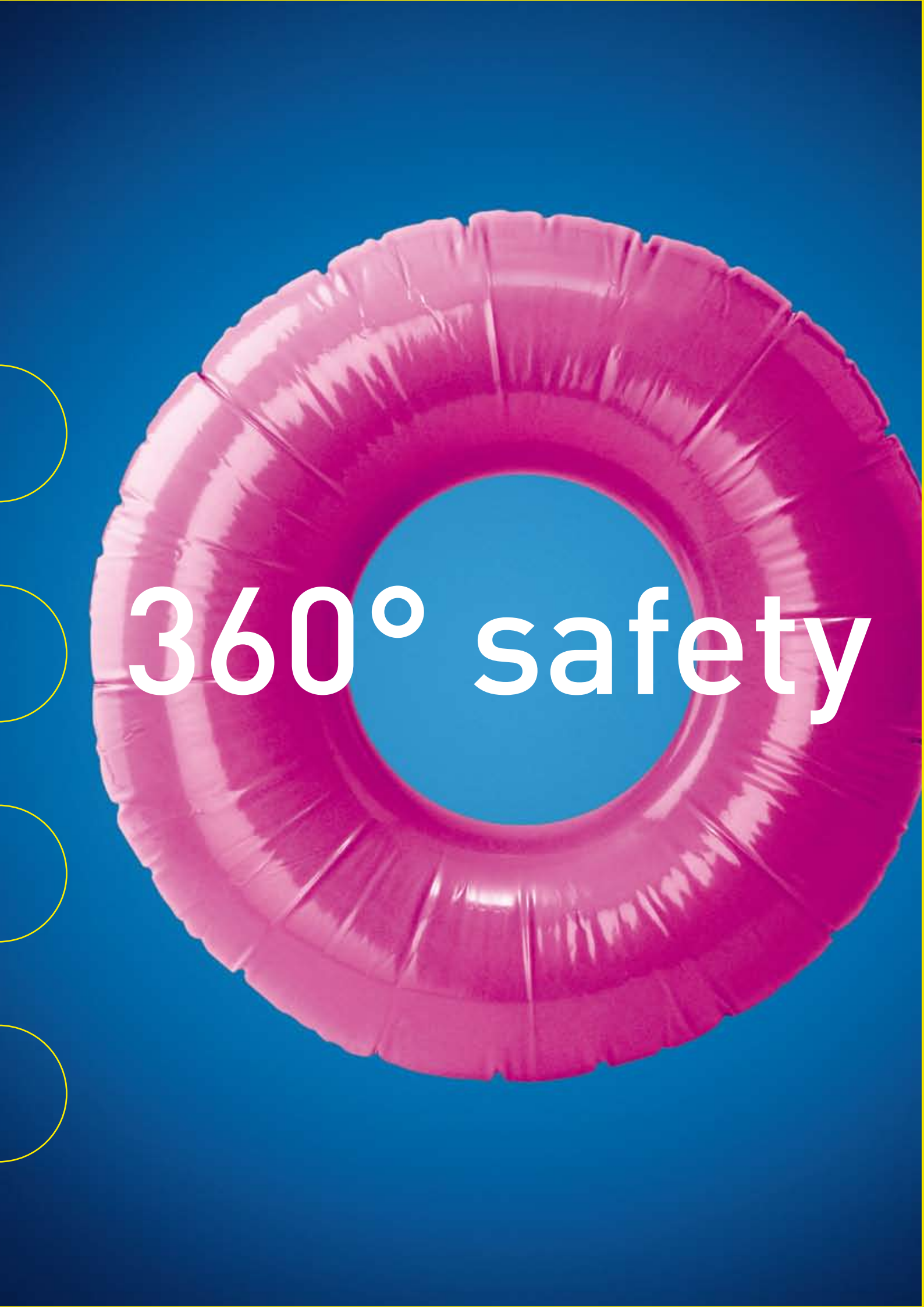
- CRRT for low weight patients
- Citrate anticoagulation dose control
- oXiris™ and septeX™ membranes with unique properties
- Hemoperfusion/therapeutic plasma exchange (TPE)

PrismafleX eXeed software gives you the chance to prescribe both the therapy and the protocol that you recommend for the individual treatment of your patient. It is tailored to your needs, giving you freedom and flexibility in a safe and user-friendly manner.

Capturing this evolutionary capacity allows enhancement of the therapeutic offer whenever new treatments are developed and implemented with the PrismafleX system.

PrismafleX eXeed software opens up new horizons thanks to unique therapies enriching standard CRRT.


CRRT for low weight patients
Citrate anticoagulation
oXiris™ and septeX™ membrane
Hemoperfusion and TPE


360° safety

CRRT for low weight patients

Play it safe for children's blood treatment

There are specific challenges when it comes to the treatment of children. In particular, the low blood volume of children raises the need for reliable therapeutic equipment and monitoring.

CRRT for low weight patients is often faced with critical situations. For instance, a fluid inconsistency error bears the risk of hyper- or hypovolaemia. Hypovolaemia may lead to hypotension, tachycardia and, in the worst case, to shock.

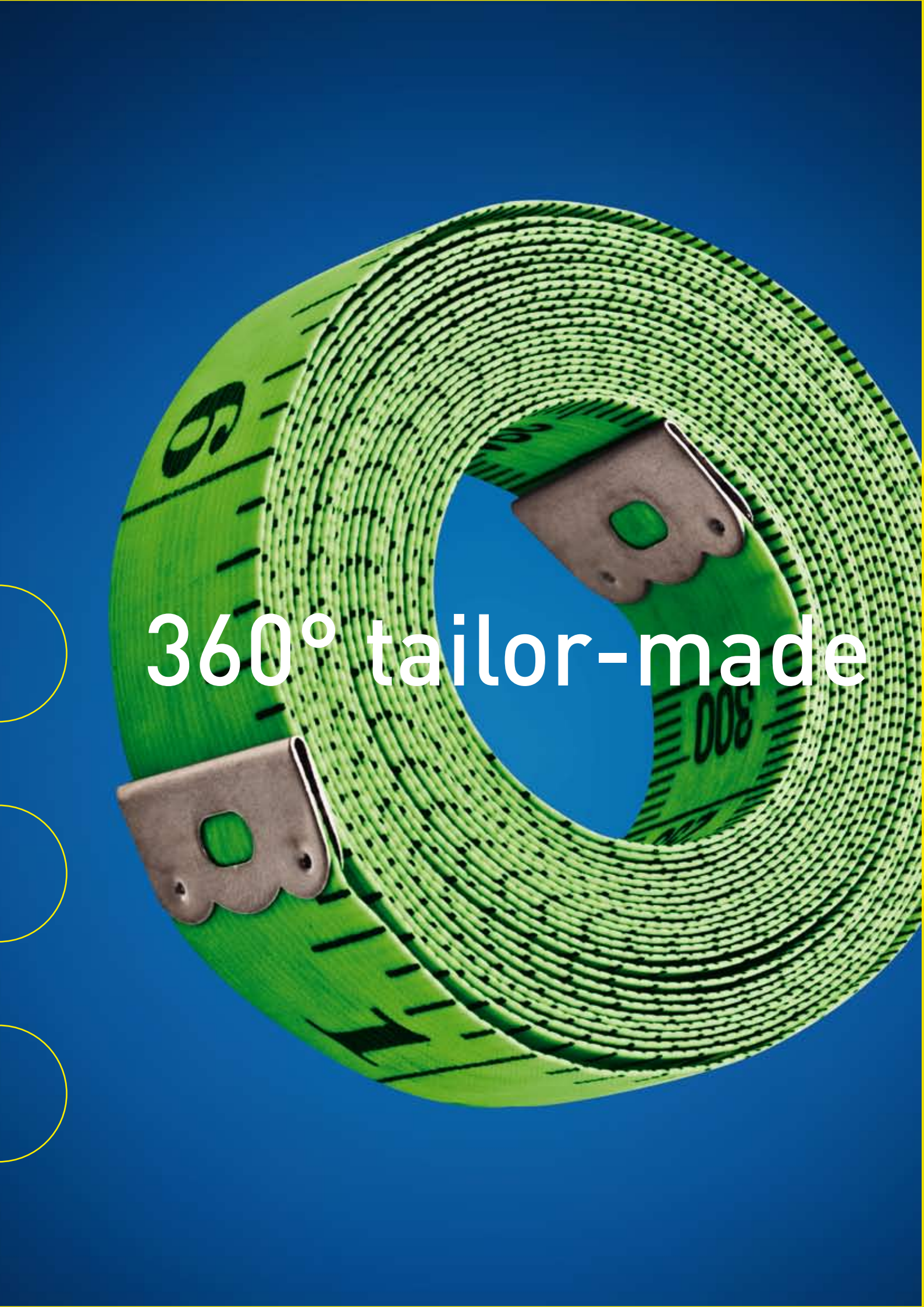
According to all therapy guidelines, the extracorporeal circuit should not exceed 10% of the patient's total blood volume. Therefore, CRRT for low weight patients requires the smallest extracorporeal blood volume possible.

Reliable and safe therapy for the little ones

A very precise therapy option on the new and innovative PrismafleX eXeed system controls all the pumps and ensures a highly accurate fluid balance.

This enables the close monitoring and safe treatment of children weighing 8 kg and above.

The system is completed by a specially designed, new PrismafleX HF-20 set, which offers one of the smallest available extracorporeal blood volumes. The advanced tubing that the system contains prevents clotting while optimizing the blood flow rate.


360° tailor-made

Citrate anticoagulation

Discover individualized and easy-to-handle anticoagulation management

Anticoagulation management is a very delicate and significant part of CRRT. Freedom to choose the best suitable anticoagulation method (whether systemic or regional) is of crucial importance for each individual treatment.

Continuous delivery of anticoagulant has a direct impact on the bleeding risk and, therefore, on the patient's safety. Selection of the best suitable anticoagulation method should not lead to any limitation in the CRRT dose delivery.

PrismafleX eXeed software allows the implementation of citrate anticoagulation while achieving the prescribed dose, hence enabling both efficient performance of CRRT and simultaneous achievement of the recommended effluent dose of 35 ml/kg/h, primarily by convection.

Safe solution for adequate dose delivery

Filter clotting leads to reduced CRRT dose delivery, increased transfusion needs, and additional workload.

Thus, it is crucial to monitor the anticoagulant dose administered because the patient's metabolic parameters are individually affected by the type of citrate solution used. Using PrismafleX eXeed software, regional citrate anticoagulation can be implemented in an effective, safe and easy manner.

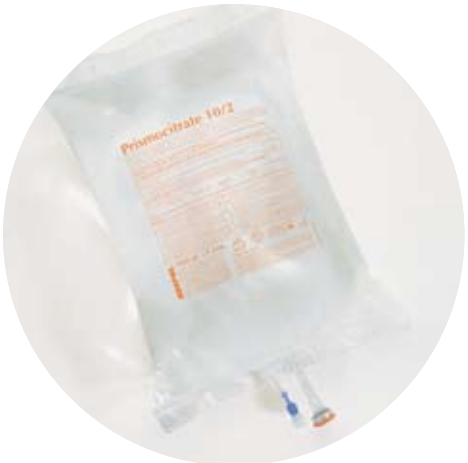
Citrate can be delivered with the fifth pump while the four other pumps can handle all the other fluids (blood, effluent, replacement, dialysate). Citrate dose parameters remain constant thanks to the coupling of blood and citrate pumps.

All parameters, such as the citrate dose or flow rates, are displayed and easily accessible on the interactive user interface. Specific alarms have also been included to ensure safe and easy treatment.

Gambro recommends the use of dilute citrate solution with physiologic sodium concentration, like Prismocitrate solution, to reduce the risks of metabolic disturbances that have been reported in the literature (metabolic alkalosis, hypernatremia).[1]

The PrismafleX eXeed system is open and flexible enabling the implementation of any protocol, as required by the therapy selected.

1. AJ. Tolwani, MB. Prendergast, RR. Speer, BS. Stofan, and KM. Wille. A Practical Citrate Anticoagulation Continuous Venovenous Hemodiafiltration Protocol for Metabolic Control and High Solute Clearance; Clin J Am Soc Nephrol 1: 79–87, 2006




360° vitality

oXiris™ and septeX™ membranes

Latest news from our R&D department

Sepsis is a complex, multifactorial and fast-evolving disease characterized by the body's overreaction to infection. Usually, the body's immune response to infection is targeted at the site of infection. In the event of sepsis, the immune response triggers an overwhelming, systemic chain reaction that activates both the inflammatory response and the coagulation cascade, ultimately leading to multiple organ damage and failure, and in the worst case, to death.

Sepsis risks at the ICU

Sepsis is a major concern in the intensive care unit. Endotoxins i.e. lipopolysaccharides released from Gram-negative bacteria, are amongst the main substances which can trigger sepsis by activating the immune response to Gram-negative bacterial infections.

Risks associated with endotoxins in the bloodstream

- Release of cytokines, such as interleukin-1, interleukin-6,TNF-alpha
- Activation of complement and coagulation factors leading to septic shock and multiple organ failure

Acute renal failure is frequent in patients with sepsis due to fluid redistribution, hypoperfusion and circulating nephrotoxins, many of which are released following cell injury.

Two membranes with unique properties

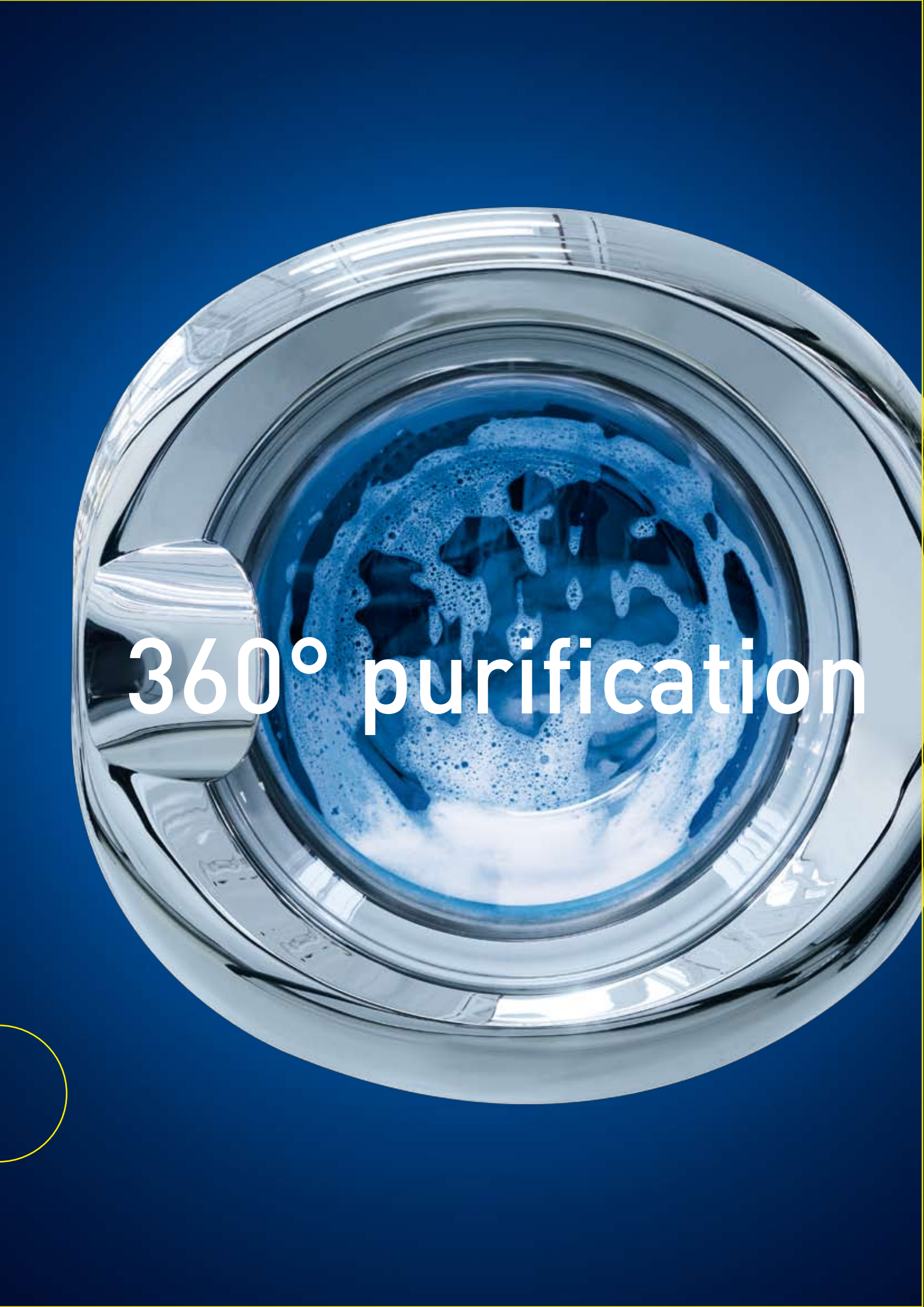
Along with the new PrismafleX eXeed software, we offer two new products intended for CRRT, presenting additional properties targeting specific molecules involved in the sepsis cascade:

oXiris™

- Made of a specific, pre-heparin-coated membrane
- Able to selectively adsorb endotoxins, cytokines and anaphylotoxins

septeX™

- Made of a specific membrane with a high cut-off point
- Able to remove non-selectively all molecular weights up to 45 kDa (e.g. some humoral mediators of the inflammatory response)


360° purification

Hemoperfusion and therapeutic plasma exchange

Polyvalence and simplicity for safe treatment

Freedom to perform the best-suited blood purification therapy on the patient is now possible thanks to PrismafleX eXeed software.

Intoxication management by hemoperfusion.

During hemoperfusion (HP), the blood passes through a column with adsorptive properties (molecular adherence) aiming at removing specific toxic substances from the patient's blood. It especially targets small- to medium-sized molecules that tend to be more difficult to remove by conventional hemodialysis.

Hemoperfusion is mainly used for the treatment of drug or chemical intoxications. Two sizes of hemoperfusion kits (PrismafleX Adsorba® 150 and 300) are available for treatments with PrismafleX eXeed software. Each of these kits contains an activated charcoal column and the associated bloodlines.

In addition, PrismafleX eXeed software has been specifically designed with a user interface facilitating treatment implementation and enabling the achievement of the desired effect.

Plasma protein removal by therapeutic plasma exchange

When targeted molecules cannot be cleared by conventional hemodialysis, therapeutic plasma exchange (TPE) may provide an effective alternative.

Plasma exchange is obtained by plasma filtration of very large plasma proteins through the large pores of the filter membrane, with simultaneous infusion of a plasma replacement solution.

Two types of TPE sets (for adults and patients weighing 9 kg and above) offer treatment flexibility. Pre-connected lines facilitate the platform installation and the user interface ensures simple and self-explanatory treatment procedures.

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