



CARPEDIEM™
CARDIO PEDIATRIC DIALYSIS EMERGENCY MACHINE

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The treatment designed for neonatal patients

CARPEDIEM™ was designed to offer a truly 'paediatric' device: miniature and portable, it responds to the safety and efficacy requirements for renal replacement therapies in neonatal patients.

Acute renal failure in the newborn: an 'orphan' disease

Acute renal failure in neonatal intensive care units reaches incidence percentages ranging between 5% and 20% of the cases observed.

Acute Kidney Injury (AKI) in the post-natal phase is typically caused by ischemic, toxic or obstructive conditions. In children with congenital cardiopathy, the risk of AKI is particularly high as a result of:

- Altered haemodynamics
- Renal hypoperfusion
- Low cardiac output.

In clinical practice today, most renal replacement therapies for paediatric patients weighing less than 10 kg is administered with adult devices used 'off label'.

Whereas critical adult patients receive renal support with advanced devices and the most stringent safety features, smaller patients have until today not been able to count on personalised treatments, especially with regard to fluid balance.

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The right therapy way



The right therapy way

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The aims of Research & Development.
Minimum invasiveness, maximum efficacy:
the added value of CARPEDIEM™



Uniqueness

CARPEDIEM™ is the only device on the market capable of performing ultrafiltration and haemofiltration in new-born babies with a body weight between 2.5 and 10 kg.

The painstaking research and development work in collaboration with the Department of Nephrology and **IRRIV** of Vicenza has allowed developing this device equipped with high-precision scales with an error resolution of 1 g, as well as 'devising' new peristaltic pumps featuring 3 rollers to ensure the highest precision and the most effective flow safety.

In addition, CARPEDIEM™ comes in a pre-assembled kit for specific treatment of each single patient with the possibility of choosing 3 types of different hemofilters based on the patient's weight.

The attention paid to flexibility of the treatment provides the possibility of choosing - with the same kit - between isolated ultrafiltration and haemofiltration in pre- or post-dilution.

High Performance and Efficiency thanks
to personalisable programming of:



- **Peristaltic pumps speed with 3 rollers for maximum precision of the blood, infusion and ultrafiltrate flow**



- **Highly sensitive blood leakage and air detection sensors**

- **Acoustic and visual warnings**

- **Heparin pump**

- **Fluid balance control supervised by high-precision scales**



Simplicity and Accuracy

- **Reduced priming volume**

CARPEDIEM™ guarantees a priming volume as from just 25 mL. Equipped with a filter detector, it is capable of automatically calculating the priming volume required based on the hemofilter chosen.

- **Easy to handle and transport**

It comes with a trolley including an IV pole for easy transport.

- **Flexibility in the treatments**

Possibility of performing continuous ultrafiltration and haemofiltration treatments with the same disposable both in pre- and in post-dilution for a maximum time of 24 hours.

- **Uniqueness**

Unique device capable of performing ultrafiltration and haemofiltration in new-born babies with a body weight between 2.5 and 10 kg.

- **Ease of use**

The intuitive and user-friendly software and the cutting-edge innovative disposable allow installing the circuit in total safety.

- **Compact**

Thanks to its small size (45 x 50 x 22 cm), CARPEDIEM™ can be easily placed inside neonatal intensive care units.

