

Hemocor HPH[®] Hemoconcentrators

Hemocor HPH[®] 1000

Hemocor HPH[®] 400

Hemocor HPH[®] 700

Hemocor HPH[®] 1400

Hemocor HPH[®] Mini



NEW
Hemocor HPH[®] Junior

From the
World Leader in
Hemoconcentration



Benefits

- Polysulfone membrane offers excellent biocompatibility
- Proprietary fiber manufacturing process ensures consistent performance
- No-rinse fiber for convenient set up
- Complete model selection offers ultrafiltration rates for the full range of patients from the neonate to largest adult
- Meets the biocompatibility requirements of ISO 10993-4 selection of tests for interactions with blood
- Manufactured under U.S. Patent 5,762,798

Proven Therapeutic Effectiveness

Using the Hemocor HPH hemoconcentrator:

- Reduces the need for homologous blood and blood products by providing patients with their own concentrated whole blood.
- Maintains the desired hematocrit level for oxygen transport to tissues.
- Decreases the risk of post-operative bleeding through the retention of platelets and plasma coagulation proteins.
- Maintains oncotic pressure by retaining plasma proteins while quickly and gently removing excess plasma water.
- Minimizes the need for diuretic use, which may be contraindicated for some patients.

Hemoconcentration: The Treatment of Choice

The use of hemoconcentrators during cardiac bypass surgery has continued to rise rapidly. Hemoconcentration has become the preferred method of controlling hemodilution during cardiopulmonary surgery by surgeons and perfusionists throughout the world. This process is also being performed to maintain higher hematocrit levels and to reduce the need for additional blood products during and after bypass.

The Hemocor HPH Family

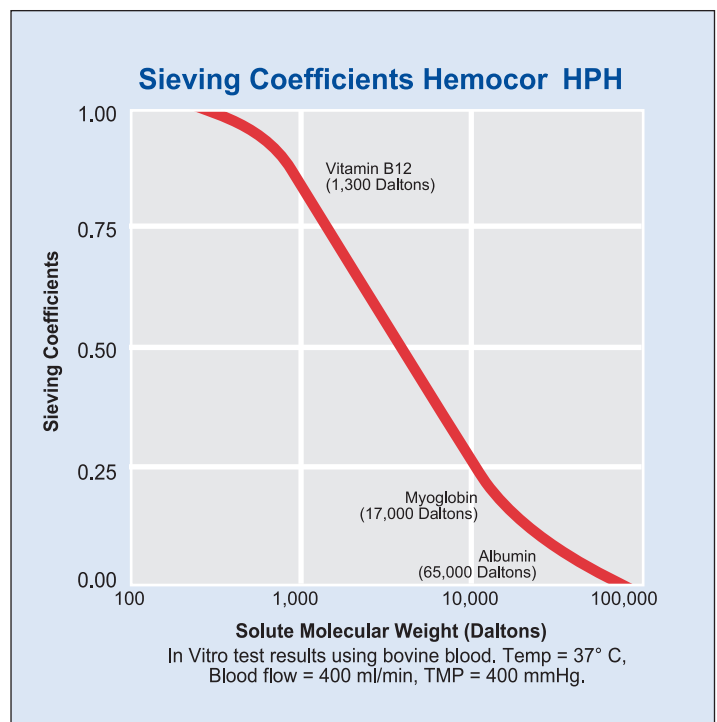
The Hemocor HPH family of high performance hemoconcentrators is designed to meet the needs of both adult and pediatric patients. The high performance of the Hemocor HPH enables the perfusionist to manage the patient's hematocrit and fluid status. The convenience of the "no-rinse" hemoconcentrator allows insertion into the extracorporeal circuit at any time during surgery without the need to rinse the unit.

Hemocor HPH hemoconcentrators are designed using glycerine-free polysulfone membranes. Such membranes have exceptional biocompatibility through a broad range of medical device applications. Their superior blood compatibility is well documented with clinical evidence.^{1,2}

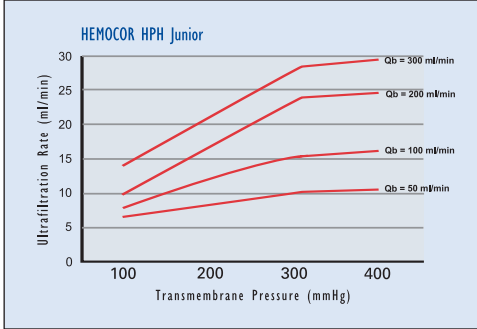
Minntech's expertise and knowledge, accumulated from over 10 years of development, manufacturing, and clinical experience, is reflected in the quality and innovation of the Hemocor HPH family.

Convenience and Value

- The Hemocor HPH provides perfusionists with a convenient and lower cost method of processing hemodiluted blood.
- The "no-rinse" hemoconcentrator can be easily inserted into the extracorporeal circuit by the perfusionist at any time during the surgical procedure.
- Shortened circuit assembly time is accomplished with the use of the optional standard tubing sets.
- Costs are reduced by eliminating purchases of capital equipment and blood processing kits.



Hemocor HPH® Junior

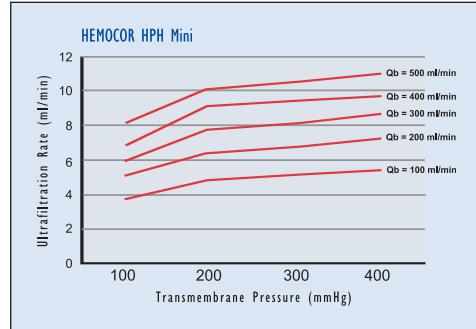


NEW



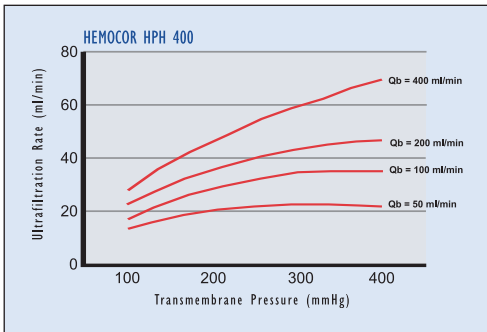
The Hemocor HPH Junior is the newest member of the Hemocor family. A lower prime volume and nearly three times the ultrafiltration potential of the HPH Mini, the HPH junior is an alternative for pediatric applications.

Hemocor HPH® Mini



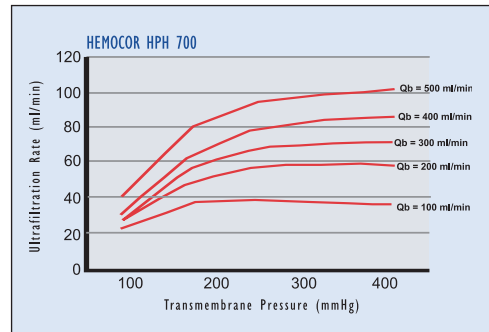
The Hemocor HPH Mini, with its low prime volume, low pressure drop and gentle ultrafiltration rate, is the ideal hemoconcentrator for the smallest pediatric patient, including the neonate.

Hemocor HPH® 400



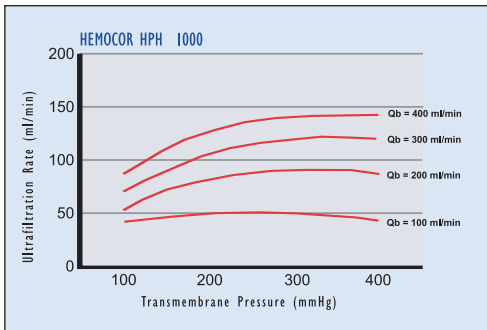
The Hemocor HPH 400 continues to be the standard in low prime hemoconcentrators. It is the preferred choice for pediatric applications or when slow continuous hemoconcentration is performed.

Hemocor HPH® 700



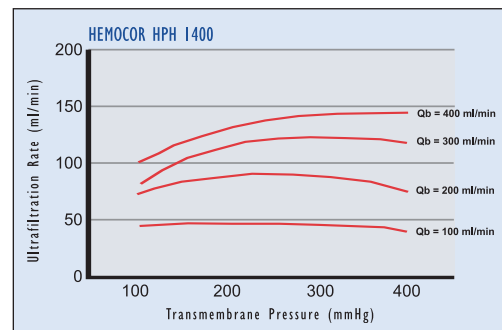
The Hemocor HPH 700 provides yet another option in managing the full range of adult patients requiring hemoconcentration.

Hemocor HPH® 1000



The Hemocor HPH 1000 combines exceptional ultrafiltration rates with a desirable, moderate prime volume. This model is the optimum choice for the majority of hemoconcentrator needs where performance and cost are important.

Hemocor HPH® 1400



The Hemocor HPH 1400 sets the mark for high performance hemoconcentrators. The high performance of the HPH 1400 may be needed during cases with long cross-clamp times or when large volumes of fluid have been administered.

Hemacor HPH Hemoconcentrator Specifications

Product	HPH JR.	HPH MINI	HPH 400	HPH 700	HPH 1000	HPH 1400
Membrane Surface Area (M ²)	0.09	0.07	0.3	0.71	1.1	1.3
Membrane Material	Polysulfone	Polysulfone	Polysulfone	Polysulfone	Polysulfone	Polysulfone
Prime Volume (ml)	8	14	34	56	84	100
Molecular Weight cut-off (Daltons)	65,000	65,000	65,000	65,000	65,000	65,000
Pressure Drop ³ (mmHg)	55 ⁴	30	61	142	85	78
Maximum Transmembrane Pressure (mmHg)	500	500	500	500	500	500
Overall Unit Length (cm)	15	15	13.8	25.3	25.3	25.3
Internal Unit Diameter (cm)	2.5	2.5	3.0	3.2	3.2	3.6
Fiber Internal Diameter (microns)	200	620	200	200	200	200
Tubing Connections						
Blood [mm (inch)]	Male Luer	Male Luer	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
Filtrate [mm (inch)]	Female Luer	Female Luer	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)

ORDERING INFORMATION

Product	Description	Packaging
HEMOCOR HPH JUNIOR	No-rinse 0.09 M ² Hemoconcentrator, Accessory Connector Package Supplied	4/Case
HEMOCOR HPH MINI	No-rinse 0.07 M ² Hemoconcentrator, Accessory Connector Package Supplied	4/Case
HEMOCOR HPH 400	No-rinse 0.3 M ² Hemoconcentrator	12/Case
HEMOCOR HPH 400 TS	No-rinse 0.3 M ² Hemoconcentrator with tubing & adapter set	12/Case
HEMOCOR HPH 700	No-rinse 0.71 M ² Hemoconcentrator	12/Case
HEMOCOR HPH 700 TS	No-rinse 0.71 M ² Hemoconcentrator with tubing & adapter set	12/Case
HEMOCOR HPH 1000	No-rinse 1.1 M ² Hemoconcentrator	12/Case
HEMOCOR HPH 1000 TS	No-rinse 1.1 M ² Hemoconcentrator with tubing & adapter set	12/Case
HEMOCOR HPH 1400	No-rinse 1.3 M ² Hemoconcentrator	12/Case
HEMOCOR HPH 1400TS	No-rinse 1.3 M ² Hemoconcentrator with tubing & adapter set	12/Case
HEMOCOR HCH-1	Hemoconcentrator Holder	1/Case

NOTES:

The HPH 1400 TS, the HPH 1000 TS and the HPH 700 TS each consist of a Hemacor HPH Hemoconcentrator with 36 inch (90 cm) lengths of 1/4 inch (6.35 mm) inside diameter tubing attached. The HPH 400 TS consists of a Hemacor HPH Hemoconcentrator with 18 inch (45 cm) of 1/4 inch (6.35 mm) inside diameter tubing attached. Ratchet clamps are included on each segment of tubing. Each hemoconcentrator, with tubing set, also includes two attached adapters with male luer lock ends and 1/4 inch (6.35 mm) male tubing connectors.

Other than the HCH-1 hemoconcentrator holder, all products are provided with a sterile and non-pyrogenic fluid pathway in an unopened, undamaged package.

¹ Chenoweth, D.E., Cooper, SW., Hugh, T.E., et al: Complement Activation during Cardiopulmonary Bypass: Evidence of Generation of C3a and C5a anaphylatoxins. New Engl. J. Med. 304:497-504, 1981.

² Kaplan, A.A. Toueg, S., Kennedy, T.L., Complement Kinetics during Continuous Arteriovenous Hemofiltration: Studies with a New Polysulfone Hemofilter. Blood Purification 6:27-36, 1988.

³ In vitro test results with bovine blood, end-to-end pressure drop, inlet conditions: Hct = 25%, total protein = 5 g/dl, temp = 37°C, Qb = 200 ml/min, TMP = 200 mmHg.

⁴ In vitro test results with bovine blood, end-to-end pressure drop, inlet conditions: Hct = 32%, total protein = 6.0 gm/dl, temp = 37°C, Qb = 50 ml/min, TMP = 100 mmHg.

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