CytoSorb® HotSwap

Quick Setup Guide

HotSwap enables the exchange of a used CytoSorb® 300 adsorber in the ongoing extra-corporeal circuit – including controlled blood return.

The exchange can take place without disconnection from the Shaldon catheter and thus support a fast as well as hygienically optimized process.

In patients with frequently required adsorber exchanges – e.g., in hyperinflammation, rhabdomyolysis or liver dysfunction – the procedure contributes to more efficient work-flows and potential time savings in everyday clinical practice.

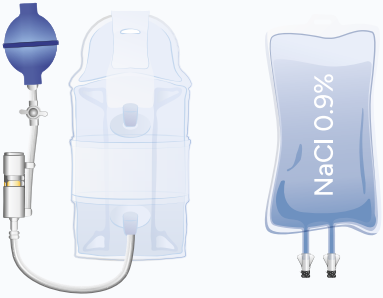
The HotSwap adapter is intended for a duration of use of up to 96 hours.

Required materials

CytoSorb Adsorber

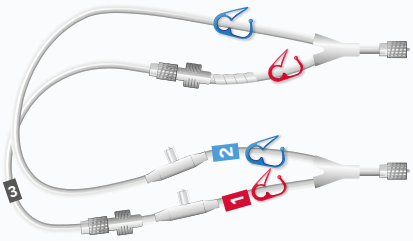


Pressure cuff and 500mL saline bag

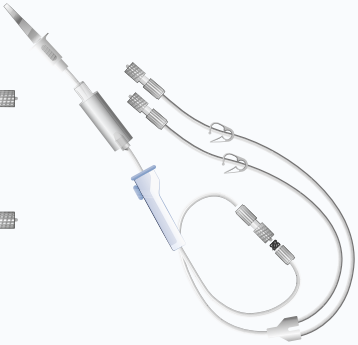


REF SE00200SP - HotSwap Set

HotSwap adapter



Flush line



2 Bridge adapter



The HotSwap adapter

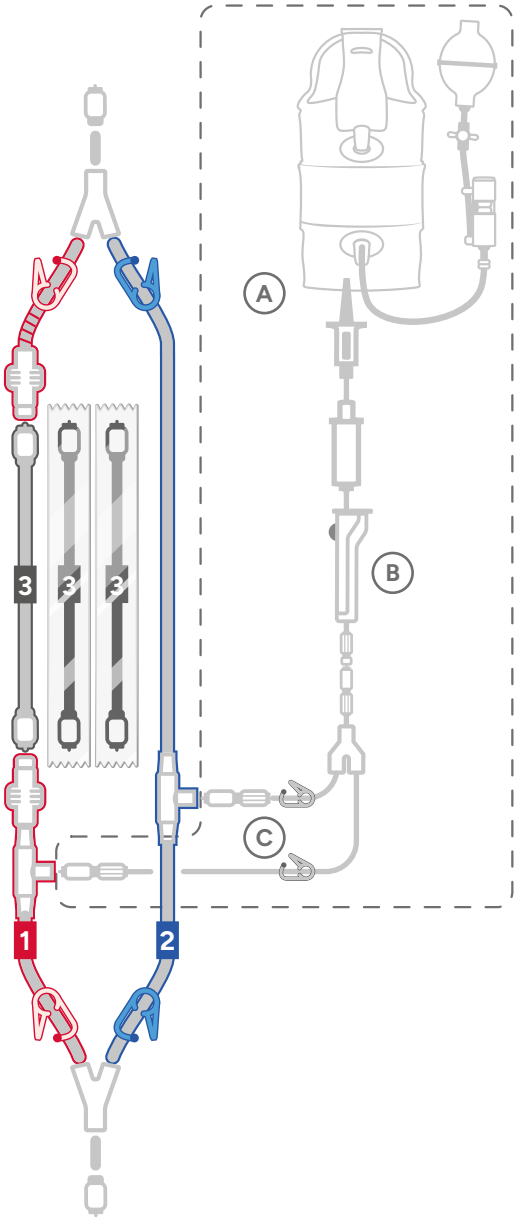
Flush system

(A) Typical pressure infusion bag with 500mL normal saline (NaCL 0.9%), e.g. from the arterial pressure flush system.

(B) Roller clamp

(C) Pinch clamps

Ensure sufficient filling of the flush bag before flushing procedures to avoid introducing air into the system.



1 Adsorber line
Blood flows during treatment through this line with connections for bridge adapter or adsorber.

2 Bypass line
Blood flows through this line only during the adsorber exchange. During normal operations, this line is flushed with saline and clamped.

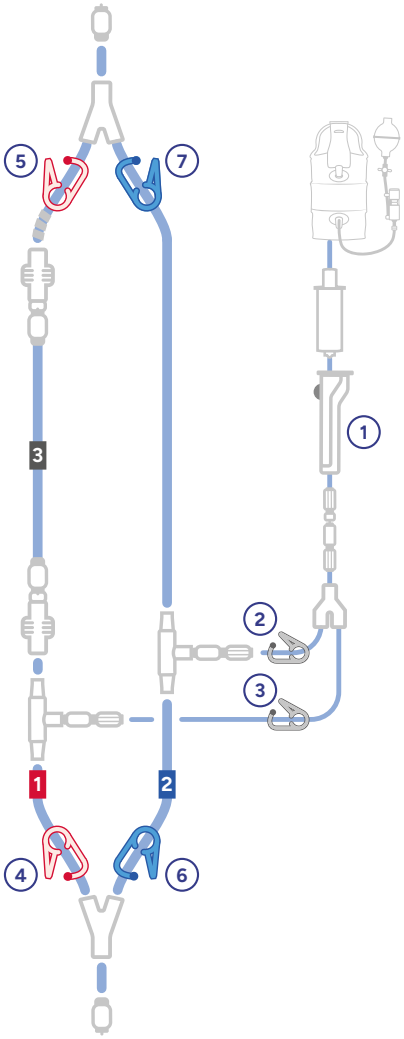
3 Bridge adapter

- For connecting the ports when no adsorber is installed.
- Removed when the adsorber is installed.
- 2 sterile packaged bridges included in the set, e.g. for a discontinuation trial.

01 Integrate HotSwap into CRRT or HP

Integrate HotSwap (using the adapter, see **08**) during setup of the extracorporeal circuit (EC) and prime all line components.

Afterwards, the system is prepared for the start of treatment.



Please perform the steps in the order indicated by the numbers ①, ②, … .

- ▶ Connect the flush line to the saline bag and prime.
- Afterwards close ①, ②, ③
- ▶ Flush the adsorber line and bypass line until free of bubbles.
- Afterwards close ④ and ⑤
- ⑥ and ⑦ remain open.

Legend

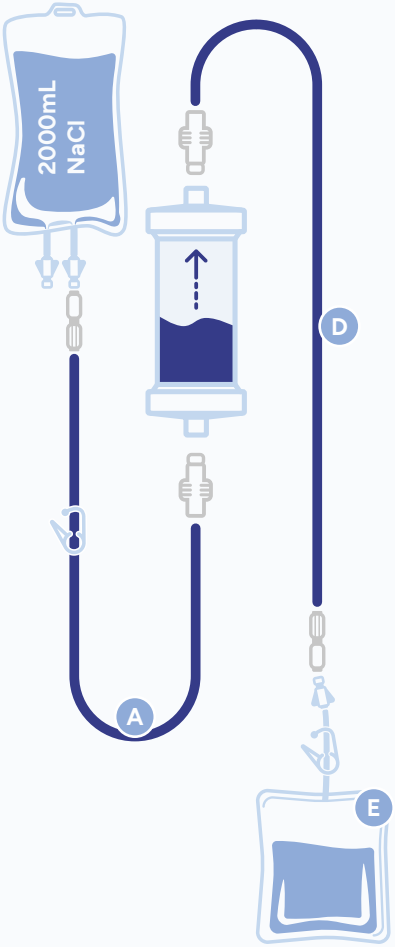
Flow direction | Clamp closed | Clamp open | Flush with saline solution | Filled with saline solution | Filled with blood

02 Prime the adsorber

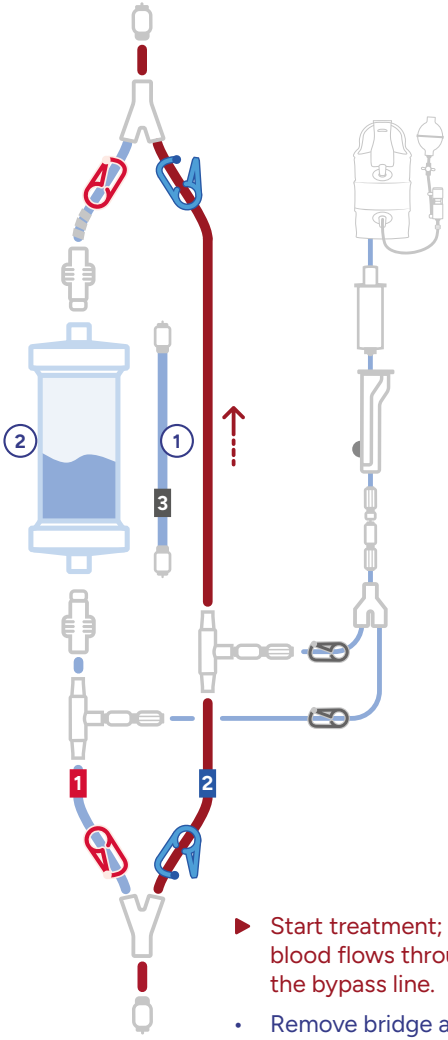
Before integration and adsorber exchange:

prime the adsorber using adapter set 1b.

A Red Luer Lock – Red DIN Lock
D Blue Luer Lock – Blue DIN Lock
E 2 liter disposal bag



03 Integrate the adsorber

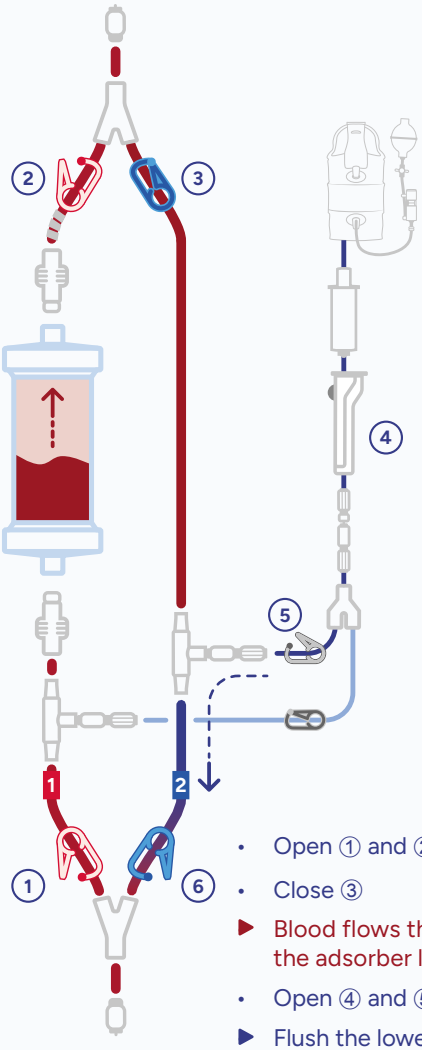


- ▶ Start treatment; blood flows through the bypass line.
- Remove bridge apater ①
- Install pre-primed adsorber ②

- Never remove both caps from the adsorber at the same time!
- Keep the adsorber caps on the used bridge adapter ①.

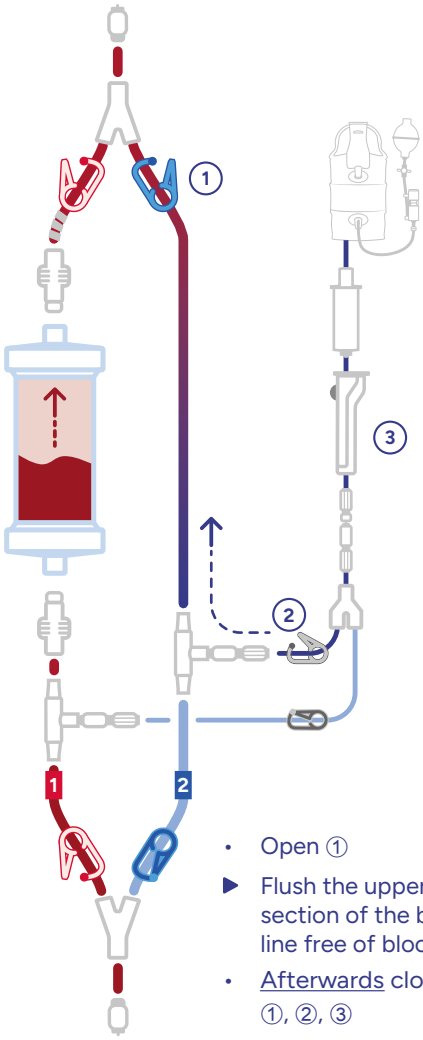
04 Prime the bypass

04.1



- Open ① and ②
- Close ③
- ▶ Blood flows through the adsorber line.
- Open ④ and ⑤
- ▶ Flush the lower section of the bypass line free of blood.
- Afterwards close ⑥

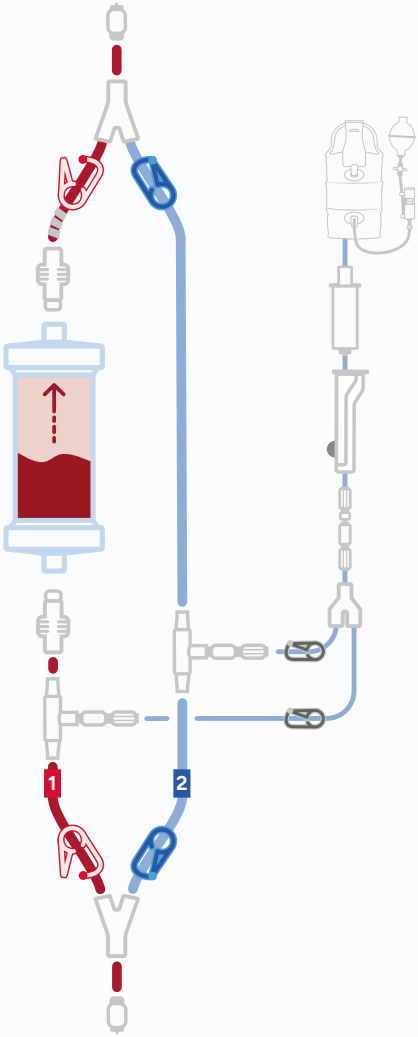
04.2



- Open ①
- ▶ Flush the upper section of the bypass line free of blood.
- Afterwards close ①, ②, ③

Flow direction | Clamp closed | Clamp open | Flush with saline solution | Filled with saline solution | Filled with blood

05 CytoSorb treatment

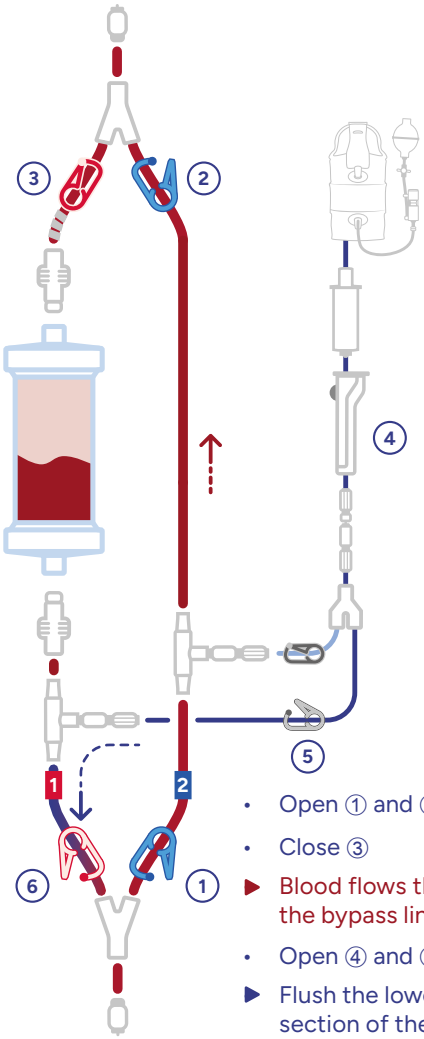


Consider changing the adsorber depending on the indication and course of treatment:

- Maximum 24 hours per adsorber.
- In the case of high target substance levels with a risk of saturation, consider changing the adsorber earlier, e.g. after 6-8 (or 12) hours.

06 Blood return

06.1

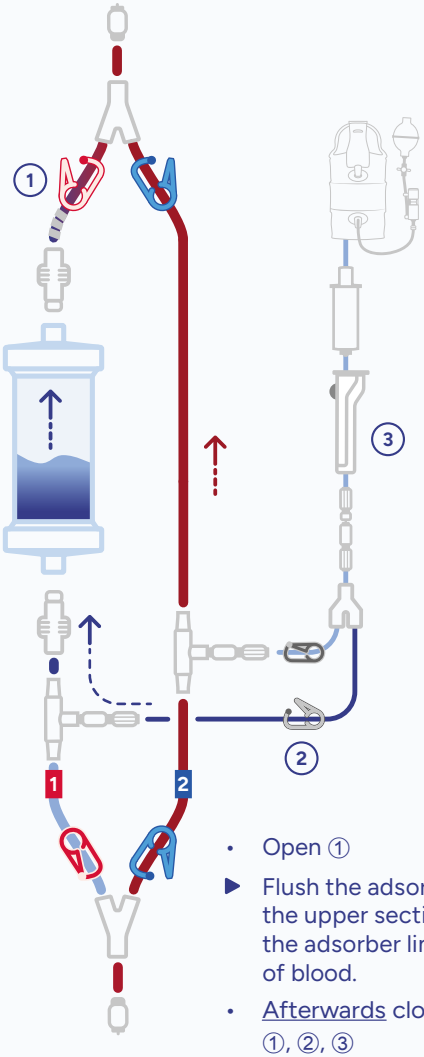


- Open ① and ②
- Close ③
- ▶ Blood flows through the bypass line
- Open ④ and ⑤
- ▶ Flush the lower section of the adsorber line free of blood.
- Afterwards close ⑥

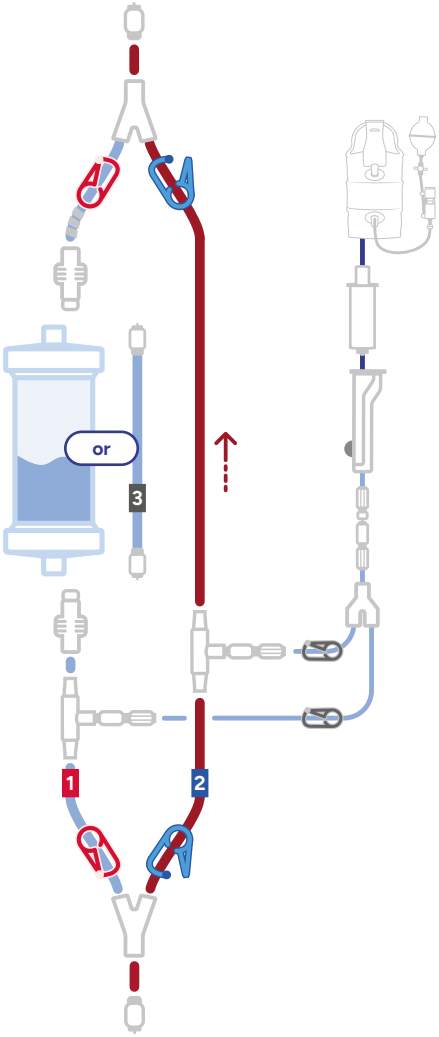
- It's recommended to use a fresh 500ml bag of saline for each blood return. Approximately 250–300ml of saline is required per blood return procedure.

07 Adsorber exchange / Discontinuation trial

06.2



- Open ①
- ▶ Flush the adsorber and the upper section of the adsorber line free of blood.
- Afterwards close ①, ②, ③



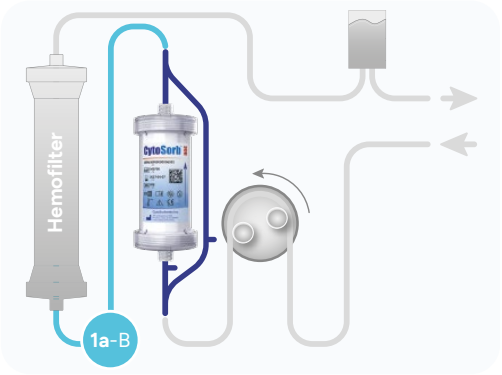
- To continue CytoSorb therapy, install a new pre-primed adsorber (see **04.1**).
- **Or** insert a new sterile bridge adapter. Ensure proper priming.

Flow direction | Clamp closed | Clamp open | Flush with saline solution | Filled with saline solution | Filled with blood

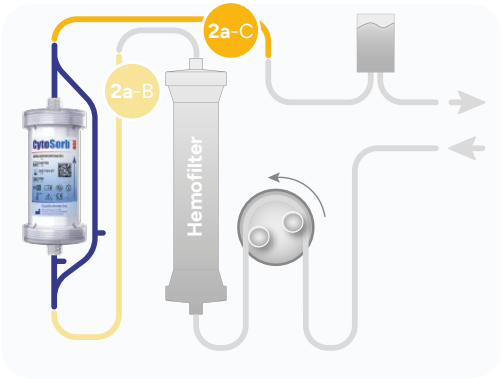
08 Integration of the HotSwap adapter into extracorporeal circuits

The HotSwap adapter should be installed during system setup and primed together with the system. For integration into CRRT, the lines shown from adapter sets 1a and 2a are required.

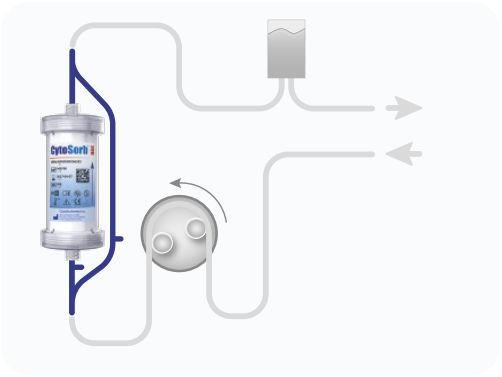
CRRT – Pre Filter



CRRT – Post Filter



PuriFi / HP



HotSwap

Adapter Set 1a – B



Adapter Set 2a – B



Adapter Set 2a – C



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This decision guidance is non-binding and cannot replace the therapy decisions of the treating physician, who is in all cases responsible for the development and implementation of an adequate diagnostic and therapeutic plan for each individual patient. This chart is based on clinical data and best practice gained with CytoSorb® 300 and not transferable to any other blood purification device. CytoSorb should only be administered by personnel who have been properly trained in administration of extracorporeal therapies. CytoSorb is not available for commercial sale in USA. CytoSorb and CytoSorbents are trademarks of the CytoSorbents Corporation, USA.
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