



MEDOS DELTASTREAM®

Bloodpump-System

New Ways in Heart Surgery

The MEDOS DELTASTREAM® opens up new ways in perfusion techniques offering versatility, flexibility and a high safety performance.

An innovative system enables a patient-near- and gentle application.

An investment in future.



MEDOS DELTASTREAM®

Bloodpump-System



DP1



DP2



DP1 / DP2 / Console

DELTASTREAM® Bloodpump DP1

- high pump efficiency at compact model size
- the integrated motor enables a patient-near application
- high dynamic at pulsatile mode
- low priming volume (30ml)

DELTASTREAM® Bloodpump DP2

- separate pump-head and drive
- large application range
- non pulsatile application
- extremely low priming volume (17ml)

DELTASTREAM® Console

- integration in all available HLM devices possible
- easy handling via a modern TFT touch screen monitor
- internal batteries provide high operating safety
- trollies for different applications available

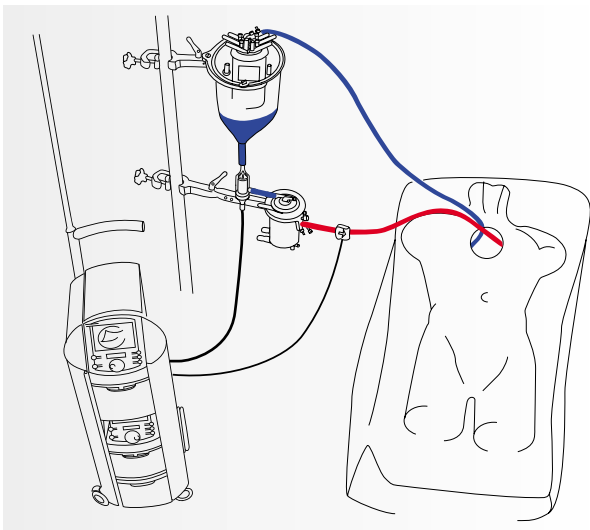
Intelligent operational modes

- rotational speed control
- preload control
- optional pulsatile control (DP1)
- zero-flow-mode

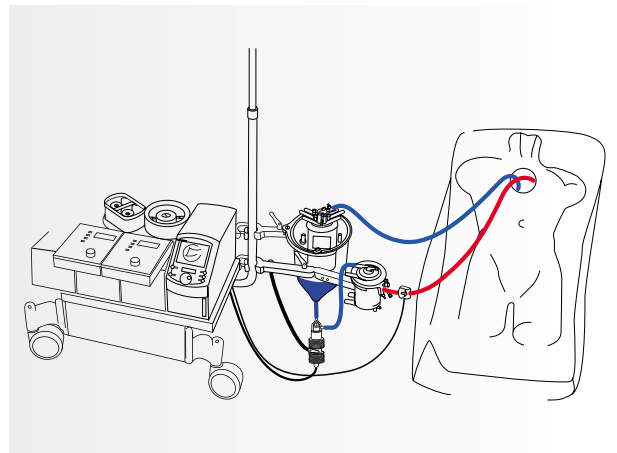
Safety

- flow-sensor with integrated bubble detection
- level-sensor
- four pressure-sensors
- temperature-sensor

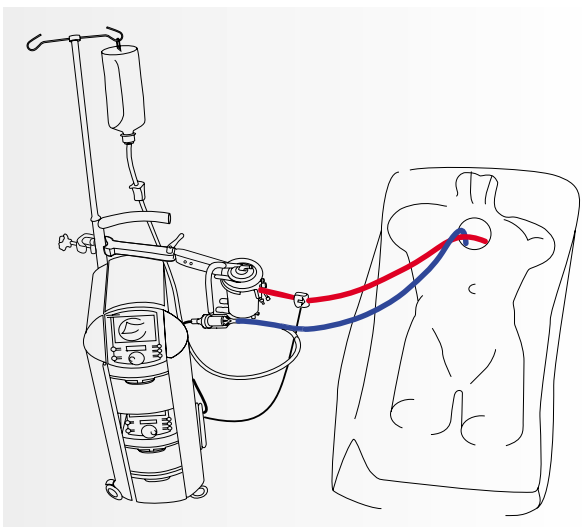




1 DELTASTREAM® VAVD (vacuum assisted venous drainage)



3 DELTASTREAM® Standard HLM-Configuration

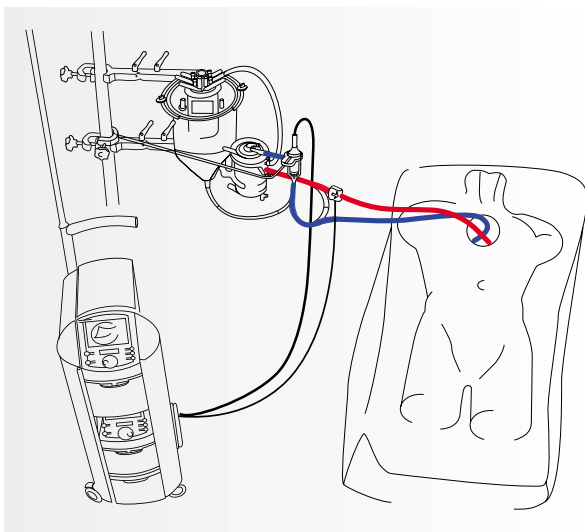


2 DELTASTREAM® Simplified ECC (beating heart assist)

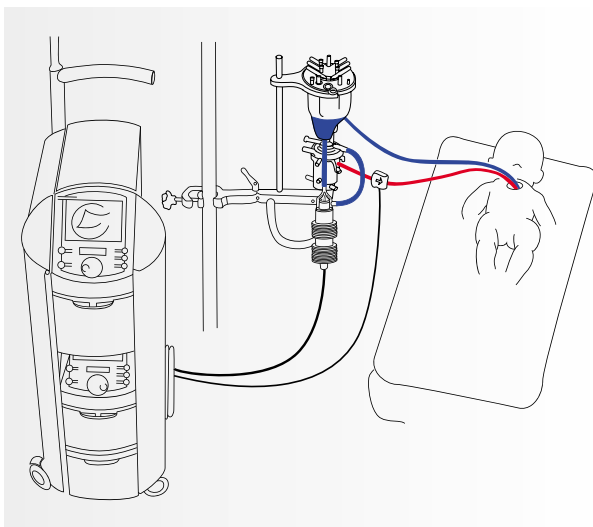
- 1
 - low priming volume with all ECC applications
 - vacuum assisted venous drainage enables a patient near positioning
- 2
 - safe application to the beating heart
 - complete circulatory assist
 - low priming volume
 - preload control
- 3
 - for integration in standard HLM (Heart Lung Machine)
 - high application safety and blood-relieving alternative to the roller pump
- 4
 - closed ECC system
 - minimum filling volume
 - volume controlled pressure management
 - preload control
- 5
 - minimum filling volume
 - sensitive control of smallest flowrates
 - safe and easy configuration

The DELTASTREAM® DP1 and DP2 are rotational pumps with a diagonally streamed impeller. A high dynamic performance at low blood damage is achieved due to an optimal flow guide. The DP1 distinguishes from the DP2 by the integrated motor and an optional pulsatile flow guide. The extremely flexible positioning of the DELTASTREAM® pumps allows a maximum shortening of the tube length. Filling volume and artificial surfaces are thus minimized.

Specific steering- and safety functions are required with simplified systems in particular. The preload control prevents an aspiration of the cannula. The zero-flow-mode allows the direct interruption of the bloodflow by reducing the rotational speed, and so prevents an unintentional back-flow. Additional safety features, such as a flow measuring sensor with integrated bubble detector, four pressure sensors to be placed freely, as well as a level sensor for open ECC systems make the DELTASTREAM® a safe choice in modern perfusion.



4 DELTASTREAM® PRECiSe
(Priming Reduced Extracorporeal Circulation Setup)



5 DELTASTREAM® paediatric- and infant perfusion



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Bloodpump-System



Perfusion Technology pointing the way to future

Heart surgery and subsequently also perfusion technology are subject to a constant change. A difficult patient collective as well as an increasing demand on blood compatibility of extracorporeal perfusion systems will lead to new developments in perfusion techniques.

The DELTASTREAM® stands for central technology to tread these new paths. The aim is to offer mainly simplified perfusion systems to allow a most possible, patient-near application.

The DELTASTREAM® technology distinguishes from standard technology in two essential points:

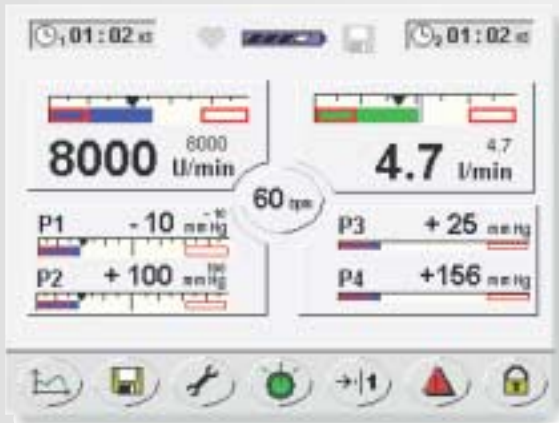
The compact model of the DELTASTREAM® pump makes an extremely flexible positioning of the pump system possible.

The functional simplification of perfusion systems places increased demands on driving systems. The DELTASTREAM® herewith offers extensive steering- and safety functions.

Individual and safe

The flexibility of the DELTASTREAM® technology offers essential advantages in clinical application. The simplification of perfusion systems can be made gradually, in agreement with the users, and with a maximum safety for the patient.

The DELTASTREAM® technology offers no standard solutions but allows the user various stages of system simplification. Individual perfusion solutions are our strength. A gentle patient treatment is our aim.



Technical Data

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<p>■ DELTASTREAM® DP1 Pump</p>	<p>Flow 0-8 l/min Rotational speed 100-10.000 U/min Pressure difference 0-600 mmHg Filling volume 30 ml Size L,Ø 150 mm, 41 mm Weight 285 g</p>
<p>■ DELTASTREAM® DP2 Pumphead</p>	<p>Flow 0-8 l/min Rotational speed 100-10.000 U/min Pressure difference 0-600 mmHg Filling volume 17 ml Size L,Ø 75 mm, 41 mm Weight 100 g</p>
<p>■ DELTASTREAM® DC Console</p>	<p>Size w,h,d 178 mm, 306 mm, 427 mm Weight 18 kg Mains supply 100/240 V, AC, 50/60 Hz Accumulator 40 - 240 min (load depending) Data logger up to 6 days maximum Display Touchscreen TFT Data interface Floppy, RS 232 optional</p>
<p>■ OPERATING MODES</p>	<p>Pulsation 40-90 bpm (only with DP1 pump) Control data Rotational speed, preload control, zero flow Sensors Flow, pressure (4 x), bubble detection, fill level (reservoir), rotational speed</p>

