# DONORASSIST

THE ONLY DEDICATED NORMOTHERMIC REGIONAL PERFUSION SYSTEM
SPECIFICALLY DESIGNED TO MAINTAIN PHYSIOLOGICAL CONDITIONS OF THE DONOR BODY

TRANSPORTABLE

PULSATILE

$O_2$ OXYGENATED

TEMPERATURE CONTROL

ORGAN ASSIST

# BENEFITS

## BETTER TIME MANAGEMENT

- NRP transforms organ recovery into a semi-elective procedure [2,3,4]
- Reduce organ loss and damage during recovery [2, 3]
- Careful organ examination prior to explantation [2,3,4,6]
- Rapid recovery of thoracic organs simultaneously with NRP is safe [2]

## IMPROVED ORGAN QUALITY [3]

- Comparable organ function to DBD donors [1, 2]
- DCD graft survival similar to DBD donors [2]
- Pulsatile flow offers better microcirculatory perfusion [5]
- Overcome negative effects of warm ischemia [2, 3, 4,6]

## MORE TRANSPLANTABLE ORGANS

- Increase donor organ pool by 33% [1]
- Stretch donor age threshold [2]
- Double DCD liver utilization rate [3]

## EASY TO TRANSPORT AND OPERATE

- Smallest and lightest system on the market*
- Foldable trolley for easy transportation
- Modular system design and interface allows for rapid and easy implementation

1. Extracorporeal support for organ donation after cardiac death effectively expands the donor pool. Magliocca FL et al.;J Trauma 2005 Jun;58(6):1095-101; discussion 11012.
2. Improving the outcome of organs obtained from controlled donation after circulatory death donors using abdominal NRP. Miñambres et al.; Am. J of Transplant 2017, Jan 31.
3. In situ normothermic regional perfusion for controlled donation after circulatory death-The United Kingdom Experience G.C. Oniscu et al.; Am. J of Transplantation 2012. Vol 14, Issue 12.p2846-2854.
4. Succesful donation after cardiac death liver transplants with prolonged warm ischaemia time using NRP. De Carlis et al.; Liver Transplant 2017, Feb 23, p166-173.
5. Pulsatile flow during cardiopulmonary bypass preserves postoperative microcirculatory perfusion irrespective of systemic hemodynamics. N.J. Koning et al.; J. Appl Physiol 2012. May, p1727-1734.
6. Normothermic abdominal regional in-situ perfusion in donation after circulatory determination of death donors. A.J. Hessheimer et al.; Current opinion in Organ Transplantation 2016 Jun 21(3), 322-8


* combination of pump, thermo unit and trolley

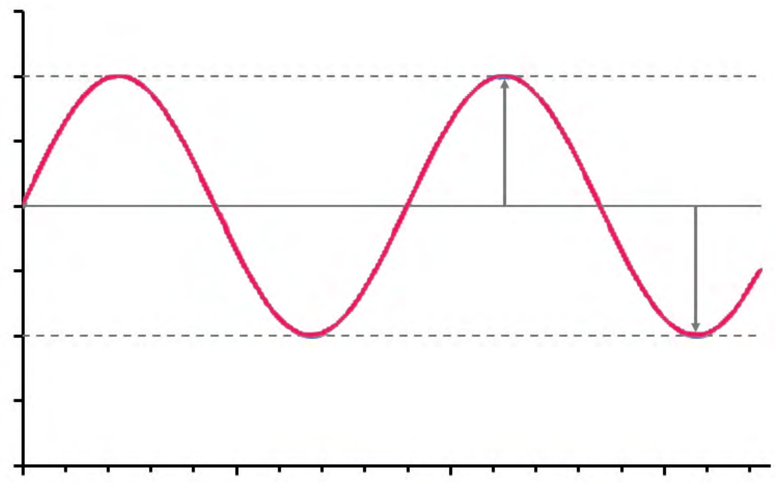
# DEVICE FEATURES

Transportation made easy, by the light-weight foldable trolley and modular system design.

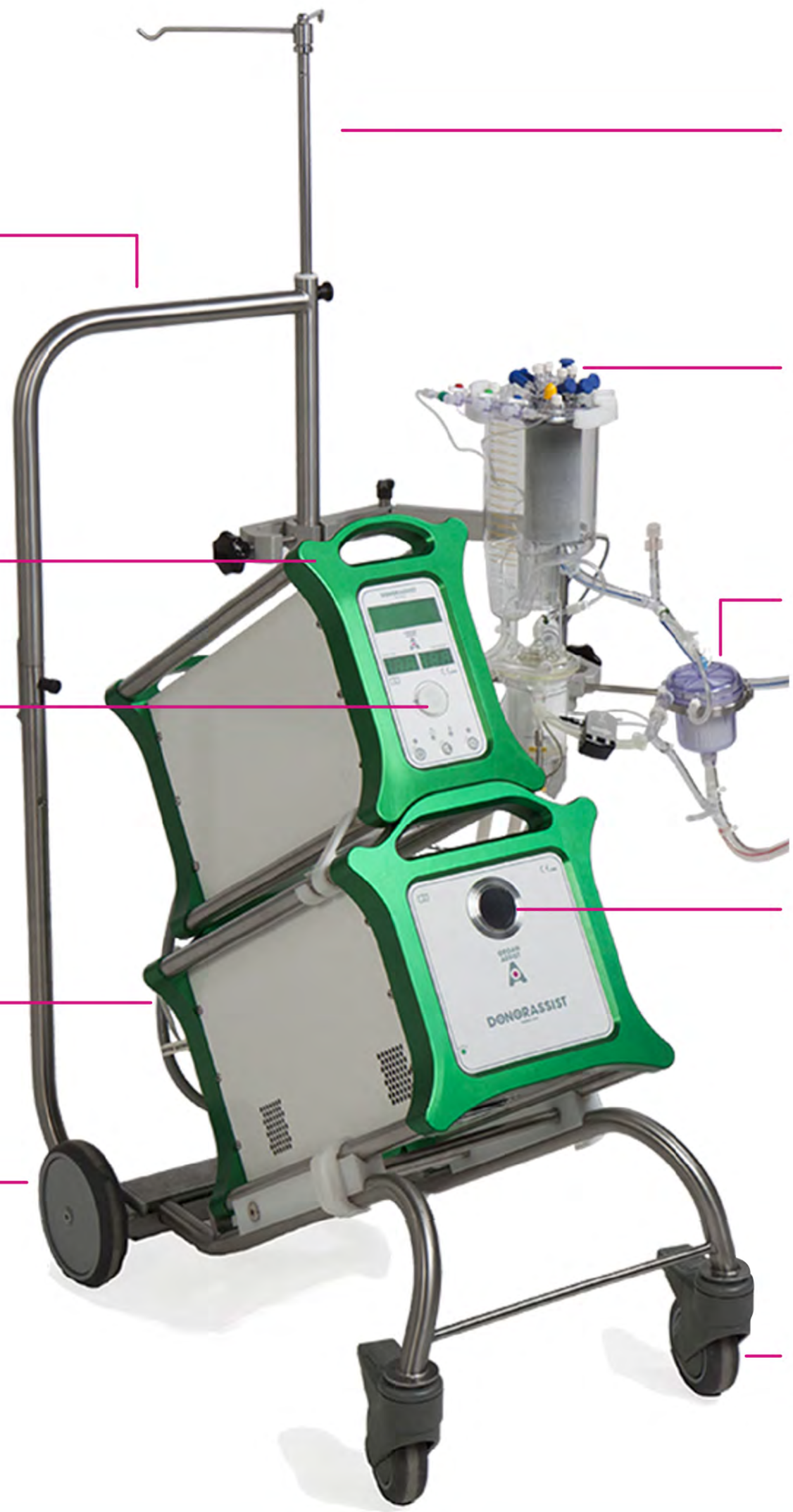
The rotary pump design allows for true pulsatile perfusion, offering superior perfusion characteristics and air handling.

Oxygenator for efficient oxygenated perfusion

Temperature control ( 30-37°C ) with integrated heat exchanger



Pulse amplitude = 20%




Height-adjustable infusion pole

Push bar

Hard-shell fluid reservoir with integrated filter allows for rapid flushing

Pump Unit: with rotary pump for efficient true pulsatile perfusion

Leukocyte reduction filter

Easy to operate: single button ontrol

Front-side water filling port, for easy filling

Thermo Unit: control perfusion temperature

Light-weight foldable trolley

360° rotating wheels with brakes

# SPECIFICATIONS

| TOTAL SYSTEM: | |
|---|---|
| Dimensions total system | 800 mm x 450 mm x 1000 mm |
| Weight total system | 41 kg (combined weight Pump Unit, Thermo Unit and Trolley) |
| Power total system | 230 VAC, 50 Hz, 740 VA |
| Battery capacity | Max. 90 minutes (fully charged batteries) |
| Battery charging | Automatic while connected to Mains, 8 hours empty-full |
| Application period | 6 hours |
| Product Life time | 7 years |
| Patent | EP2009986, US8287580, CA2647629 |
| Certification | CE, certificate CE663647 (issued by BSI Netherlands) |
| Operating conditions | +18 °C to +24 °C ; 30-85 % RH |
| Storage conditions | +5 °C to +40 °C ; 30-85 % RH |
| **PUMP UNIT:** | |
| Dimensions/weight | 460 mm x 200 mm x 300 mm; 11 kg |
| Sensors | flow (1 x), temperature (2 x), pressure (1 x), level sensor (1x) |
| Connections | mains, USB type B, data 12 pin, IP68 |
| Pulsatility | 60 BPM (1 Hz), amplitude ± 20% of mean pressure |
| Flow | Pulsatile flow 0 - 2.8 L/min |
| Pressure | Max 200 mmHg |
| Measurement/display: | Flow, Pressure, Temperature |
| Alarms: | Pressure, flow, temperature, sensor (disconnect) mains (disconnect), perfusion level, battery level, thermo water level |
| **THERMO UNIT:** | |
| Dimensions/weight | 460 mm x 290 mm x 300 mm; 19 kg |
| Power | 110-230 VAC, 50/60 Hz, 600 VA |
| Sensors | temperature (1 x), level (1 x) |
| Connections | Mains, data 12 pin, IP68, water 2 x CPC couplings |
| Thermal performance | 30 - 37 °C ; Heating $\Delta T$ = 0.3 °C/min |
| Priming volume | 1500 ml |
| **TROLLEY:** | |
| Dimensions (folded) | 700 mm x 500 mm x 340 mm |
| Dimensions (unfolded) | 800 mm x 500 mm x 1000 mm |
| Weight | 11 kg |
| Safety | Parking brakes; one click device locking mechanism |
| Poles/Handles | 1 height adjustable handle for push/pulling; 1 height adjustable infusion pole |
| Transportation mode | foldable for easy transportation |
| **DISPOSABLE SET:** | |
| Pump | Deltastream DP2, rotary pump |
| Oxygenator | Hilite 2800 with integrated venous bubble trap and heat exchanger |
| Leukocyte reduction filter | Pall LeukoGuard®-6 Arterial Filter |
| Reservoir dimensions | 1500 ml |
| Reservoir type | Hardshell fluid reservoir with integrated filter |
| Tubing | PVC, silicon |
| Access ports | Port for rapid drainage, port for rapid cold flush, 3-way sampling manyfold,. |
| Solution | Any certified machine perfusion solution |
| Priming volume | 1500 ml |
| Sterility | Single use, shelf life 3 years from manufacturing date |
| Certification | CE, certificate Z/11/02608 |

## INTENDED USE

The DONOR ASSIST is intended to be used for normothermic regional pulsatile oxygenated machine perfusion of the donor abdominal body, for a period up to 6 hours.

# PATHWAY
# ORGAN TRANSPLANTATION

| | PRECONDITIONING | PRESERVATION | RECONDITIONING |
|---|---|---|---|
| **CLINICAL CHALLENGE** | • Restore abdominal circulation<br>• Reduce warm ischaemic time<br>• Maintain biological conditions of the donor body<br>• Increase use of DCD donors | • Reduce cold ischaemic injury<br>• Support metabolism by full oxygenation<br>• Better time management<br>• Improve donor-organ quality | • Reduce end ischaemic injury<br>• Decrease time pressure in transplant hospital<br>• Functional viability assessment<br>• Reduce discard rate |
| **PORTFOLIO** | <br>**DONORASSIST** | <br>**KIDNEYASSIST**<br>TRANSPORT | <br>**KIDNEYASSIST**<br> <br>**LIVERASSIST**<br> <br>**LUNGASSIST** |

Organ Assist Headquarters

## ORGAN ASSIST: WHEN TIME COUNTS AND QUALITY SAVES LIVES

Organ Assist has been active in the field of oxygenated machine perfusion since 2005. Ever since, together with partners, Organ Assist is fully dedicated to expanding the quality and availability of donor organs.
To achieve this goal our unique portfolio enables oxygenated machine perfusion at all different time points in the pathway of organ donation; during preconditioning, preservation and reconditioning.

Organ Assist Academy

## TRAINING AND EDUCATION

Organ Assist is facilitating theoretical and practical training sessions at the Organ Assist Academy at our headquarters in Groningen. Training programs at the Academy will be tailored to your specific needs and wishes.
Courses can vary from one
to multiple days and may include:

- theoretical basics
  and background of machine perfusion
- hands-on technical use of devices
- hands-on clinical use and procedure simulation
- device maintenance

**HELPDESK:** 24/7 technical helpdesk service
**SERVICE:** maintenance services for your device
**ONLINE SUPPORT:** access all details about our devices (e.g. instruction videos) on your mobile device through the dedicated Organ Assist App



## INTERESTED?

## PLEASE CONTACT US.

For more information:
scan the QR code
or visit www.organ-assist.nl

ORGAN ASSIST

Organ Assist Products B.V.
Bornholmstraat 84
9723 AZ Groningen
The Netherlands
T +31 (0)50 313 19 05
E info@organ-assist.nl

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