The transportable kidney perfusion system which inherits four decades of experience

WAVES was designed by Waters Medical Systems, LLC to:

- Provide a single kidney transportable device alternative for the perfusion market
- Meet increased preservation demand due to changing donor demographics (Expanded Criteria Donors, Donation After Cardiac Death)
- Improve the clinician’s ability to monitor perfusion trends in real time by providing clinical trending data via a network to a remote location and trending graphs to assist with viability assessment
- Continue to improve Delayed Graft Function rates, long term graft survival rates for patients and decrease organ discard rates
- Minimize setup and training time
User interface

WAVES is equipped with a large multilingual color touchscreen technology to walk the user through setup, to control the perfusion parameters, and to monitor and address alarms.

Complete and active perfusion evaluation

WAVES continuously monitors and displays systolic, mean, and diastolic pressure, flow, temperature, and renal resistance. Data allow the user to compare perfusion trends over a period of time.
- Temperature of the perfusate is measured just before the solution is pumped into the organ.
- Pressure is measured by a pressure monometer in the WAVES cassette.
- Flow is measured by an ultrasonic Flow Probe in the arterial port onto which the kidney’s artery is connected.
- Renal Resistance (RR) is calculated using the measured systolic and diastolic pressures and measured flow.

Connected device

WAVES, as a fully connected device, can be:
- connected to the local computer network which allows for off-site or remote monitoring
- plugged to a memory stick for data transfer
- WIRELESSLY monitored on a PC, tablet, or mobile phone
Physiologic pulsatile design

WAVES employs a piston pump-head design which produces a "physiology based systolic and diastolic pressure" to generate flow. The device produces a "true" systolic (or pumping) pressure during pump-head compression and a "true" diastolic (or resting pressure) during the pumphead filling phase. The pump-head (compressing the ventricle of the cassette) expels the perfusate during the systolic phase and refills the ventricle of the pump-head during the diastolic phase.

Transport Performance

WAVES allows the donor paperwork, tissue typing materials, biopsy slides, and organ to be transported together in a safe, secure transport enclosure. Kidney is completely immersed in the solution. Protection is guaranteed even if the machine shuts down. WAVES is validated for 24 hours with extra ice filling.

Oxygenation membrane

WAVES cassette is equipped with an oxygenation membrane. Oxygenation of the perfusate minimizes Ischaemic effects and allows a better buffer effect.
IGL:
a key player
in the world
of organ transplantation.

Federal and international law restrict the sale of this device to or on the order of a physician or licensed practitioner. Please contact us for a complete list of references and authorizations.