



## **Clarity** in a heartbeat

The world's first **dedicated** paediatric cardiac function and fluid status monitor to measure both flow and pressure



# The world's first dedicated paediatric fluid status monitor to measure both

The ODM+ is the first paediatric haemodynamic monitoring system to measure both flow and pressure directly.

The paediatric oesophageal Doppler probe is minimally invasive and specifically designed for use in sedated or anaesthetised paediatric patients. Used with the oesophageal Doppler monitor (ODM+), it takes into consideration the unique physiology and anatomy of the paediatric population. ODM+ in Doppler flow monitoring mode is the gold standard for haemodynamic monitoring in adults. Connection of an arterial line for pressure monitoring mode is optional.

The clinical benefits of ODM+ stem from the direct measurement of blood flow in the central circulation. ODM+ reliably and rapidly detects the crucial small signs of haemodynamic change that are crucial to treatment decisions. ODM+ uses Doppler ultrasound to capture a visual representation of the red blood cells as they move through the descending aorta.

## ODM+ and the dedicated paediatric probe:

- Is suitable for children  $\geq 3\text{kg}$ ,  $\geq 50\text{cm}$  tall and  $< 16$  years old (for patients  $\geq 16$  years old, utilise an adult probe)
- Uses a minimally invasive, dedicated paediatric probe with six depth markers, designed to meet the physiological requirements of children
- Incorporates a specialised paediatric nomogram, based on patient height, reflecting the unique physiology of paediatric patients
- Includes a specialised body surface area formula shown to have increased accuracy in paediatric applications

**ODM+ can be safely used to monitor cardiac function and fluid status, using the dedicated paediatric Doppler probe, placed orally in anaesthetised or sedated patients**

ODM+ combines Doppler measurement of blood flow with Pulse Pressure Waveform Analysis (PPWA). This provides users with a proven, highly sensitive "Flow Monitoring Mode" and the simplest calibration of a "Pressure Monitoring Mode" for extended continuous monitoring.

## ODM+ is ideal for:

- Monitoring fluid and drug therapies in intensive care
- Monitoring cardiac function
- Monitoring of paediatric surgical patients
- Fluid monitoring in high blood loss surgery
- Perioperative fluid management

Designed for surgical and intensive care applications, ODM+ uses the most stable and extensively researched PPWA algorithm currently available.

## Instances where ODM+ and the paediatric probe can be utilised in paediatric patients include:

- Sepsis
- Major abdominal surgery
- Laparoscopic surgery
- Transplant procedures
- Cardiac procedures
- Trauma procedures
- Spinal surgery

**No other haemodynamic monitor provides both the precision of Doppler and a stable, easily calibrated continuous monitoring system for paediatric patients**

## The ODM+ System provides:

- Dedicated KDP single patient disposable paediatric probe
- Paediatric specific software that includes specialised paediatric nomogram and dedicated formula for determining body surface area
- Ability to connect to the existing patient monitoring system to provide additional blood pressure monitoring signal for calibrated PPWA

## Only Doppler provides:

- Flow Monitoring Mode
- Pressure Monitoring Mode
- Quick, easy calibration at the touch of a button

# cardiac function and flow and pressure

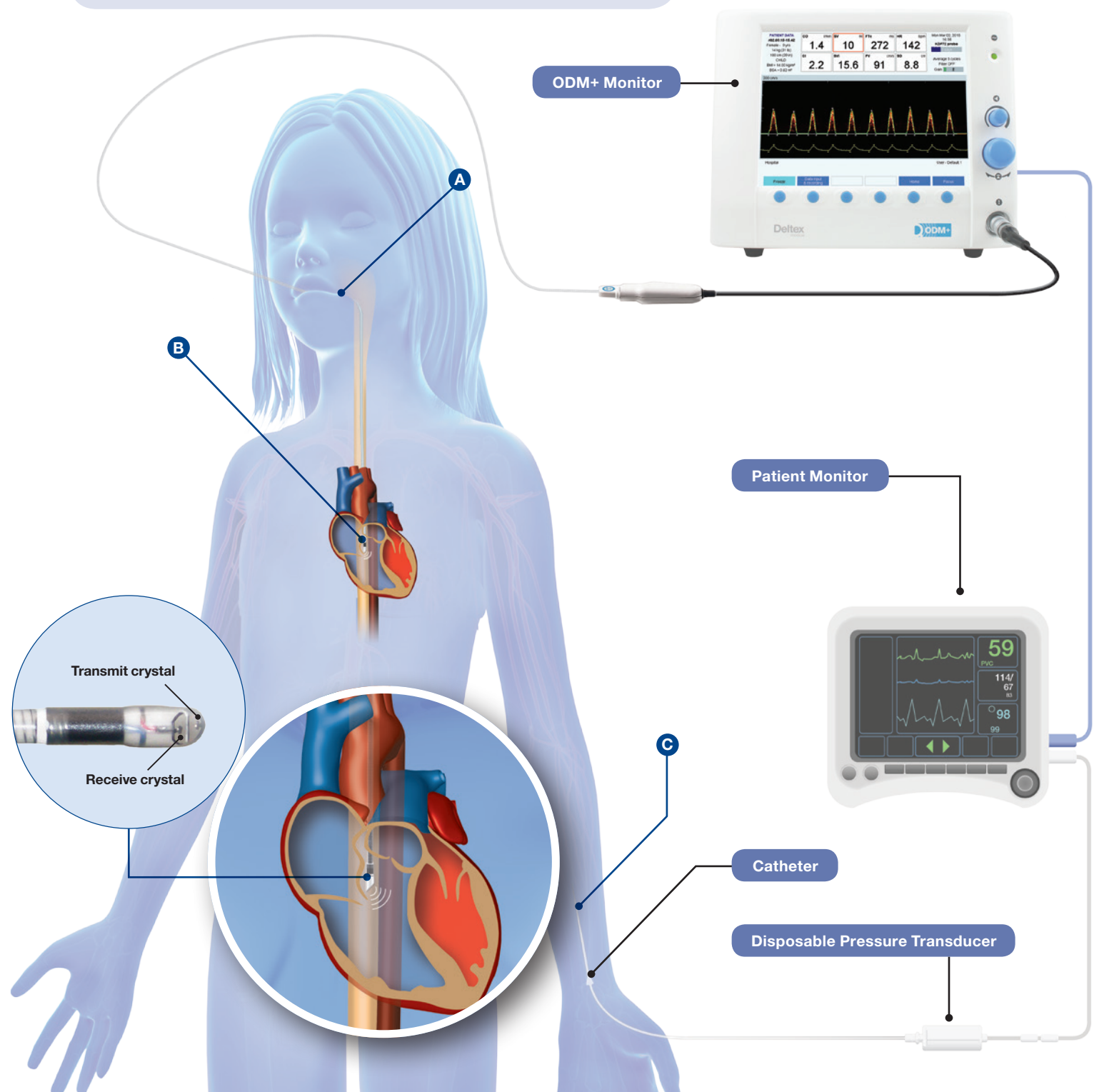


## FIGURES

- A** An oesophageal Doppler probe is inserted into the patient's oesophagus orally
- B** The transmit and receive piezo electric crystals at the tip of the probe measure velocity of blood flow in the descending aorta
- C** Peripheral artery catheter for continuous measurement of arterial blood pressure.

## Set up

Setting up the ODM+ is a simple process. Easy to use and quick to focus, a minimally invasive single patient probe is placed in the patient's oesophagus and uses Doppler ultrasound to measure the velocity of blood flow in the descending aorta. Additionally, an arterial blood pressure signal can be slaved from the high end monitor.







## References

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## Product Description

### CardioQ-ODM+ Monitor

(Product Code: 9051-7104)

For adult and paediatric use in operating room and critical care.

### Paediatric Probes

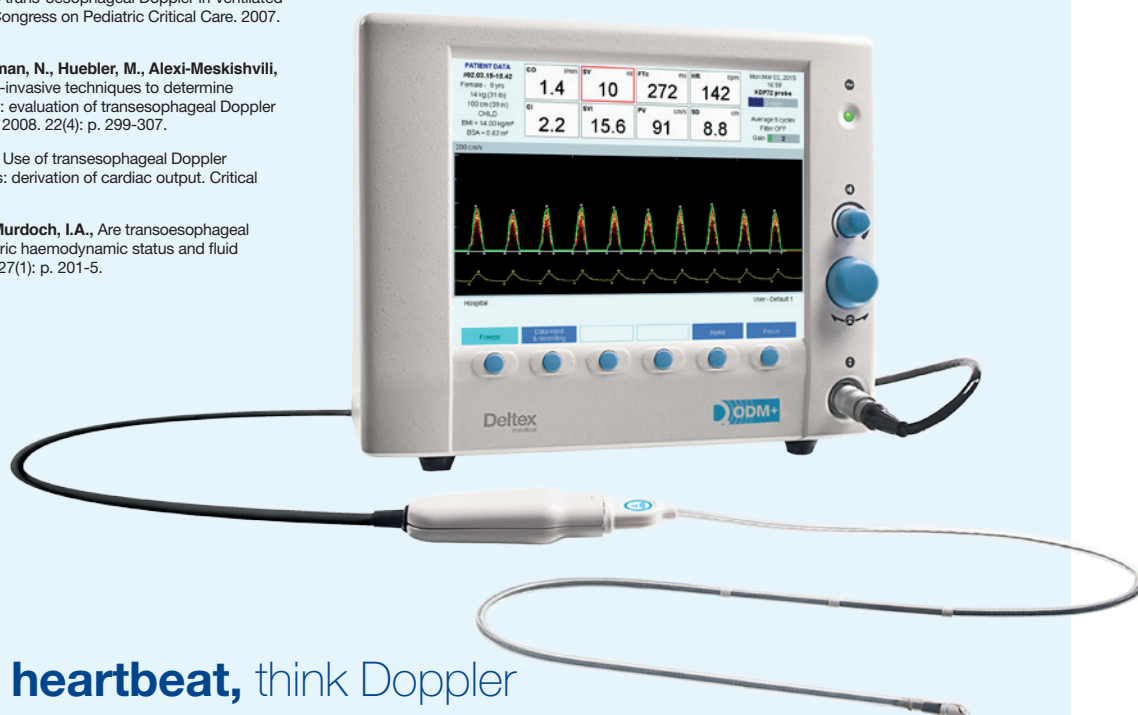
KDP72 (Product Code: 9081-7001)

72-hour oral Doppler probe for anaesthetised paediatric patients.

### Adult Probes

DP12 (Product Code: 9070-7003)

12-hour oral/nasal Doppler probe for patients under anaesthesia or full sedation.



**For clarity in a heartbeat, think Doppler**

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