

Infinity® PiCCO SmartPod™

Less invasive, beat-to-beat hemodynamic and volumetric monitoring

Now you can monitor hemodynamic and volumetric parameters – without a pulmonary artery catheter – using the Infinity® PiCCO SmartPod™. Infinity PiCCO-Technology uses quantitative parameters that are determined both intermittently through PULSION's transpulmonary thermodilution technique and continuously through arterial pulse contour analysis.

Also, the Infinity PiCCO SmartPod integrates 4 invasive pressures and cardiac output at the bedside using a single cable that connects the pod to the Infinity monitor. This design streamlines patient-monitor connections and reduces cable clutter at the point of care.

The Infinity PiCCO SmartPod can be used with Infinity Kappa, Delta and Delta XL, SC7000, SC8000 or SC9000XL monitors with VF6.1 software with the compatible hardware versions.

Measuring Capabilities

Displayed parameters

- Pulse Contour Cardiac Output (PCCO)
- Continuous Cardiac Index (PCCI)
- Stroke Volume Index (p-SVI)
- Stroke Volume Variation (SVV)
- Systemic Vascular Resistance (p-SVR)
- Systemic Vascular Resistance Index (p-SVRI)
- Index of Left ventricular contractility (dPmax)¹
- Global End Diastolic Volume (GEDV)
- Global End Diastolic Volume Index (GEDVI)
- Extra Vascular Lung Water (EVLW)¹
- Extra Vascular Lung Water Index (EVLWI)¹
- Global Ejection Fraction (GEF)
- Cardiac Output (p-CO)
- Pulmonary Vascular Permeability Index (PVPI)¹
- Arterial Pressure, Systolic, Diastolic and Mean (ART)
- Extra Vascular Thermal Volume Index (ETVI)²



TECHNICAL DATA

Parameters obtained from Pulse Contour Analysis:

Pulse Contour Cardiac Output (PCCO)

Method	Resistive strain gauge transducer and pulse contour analysis calibrated with transpulmonary thermodilution
Measurement Range	0.25 to 25 l/min
Resolution	0.01 l/min
Accuracy ³	<3%

Continuous Cardiac Index (PCCI)

Measurement range	0.01 to 15 l/min/m ²
Display resolution	0.01 l/min/m ²

Stroke Volume Index (p-SVI)

Measurement range	1 to 125 ml/m ²
Display resolution	1 ml/m ²

Stroke Volume Variation (SVV)

Measurement range	0 to 50%
Display resolution	1 %

Systemic Vascular Resistance (p-SVR)

Measurement range	0 to 30,000 dyn-sec-cm ⁵
Display resolution	10 dyn-sec-cm ⁵

Systemic Vascular Resistance Index (p-SVRI)

Measurement range	0 to 30,000 dyn-sec-cm ⁵ /m ²
Display resolution	10 dyn-sec-cm ⁵ /m ²

Index of left ventricular contractility (dPmax)¹

Measurement range	200 to 5,000 mmHg/s
Display resolution	1 mmHg/s

Extravascular Thermal Volume Index (ETVI)²

Units	ml/kg
Measurement range	1 to 50 ml/kg
Display resolution	1 ml/kg



Parameters obtained from Transpulmonary Thermodilution:

Cardiac Output (p-CO)

Measurement range	0.25 to 25 l/min
Display resolution	0.01 l/min
Accuracy ³	<1%

Global End Diastolic Volume (GEDV)

Measurement range	40 to 4800 ml
Display resolution	1 ml
Accuracy ³	<2%

Global End Diastolic Volume Index (GEDVI)

Measurement range	80 to 2,400 ml/m ²
Display resolution	1 ml/m ²

Extra Vascular Lung Water (EVLW)¹

Measurement range	10 to 5000 ml
Display resolution	1 ml

Extra Vascular Lung Water Index (EVLWI)¹

Measurement range	0 to 50 ml/kg
Display resolution	1 ml/kg

Global Ejection Fraction (GEF)

Measurement range	1 to 99%
Display resolution	1%

Pulmonary Vascular Permeability Index (PVPI)¹

Measurement range	0.1 to 10
Display resolution	0.1

Arterial Pressure (Systolic, Diastolic, Mean)

Method	Resistive strain gauge transducer and Pulse contour analysis
Measurement range	0 to 300 mmHg
Display resolution	1 mmHg
Accuracy	± 1 mmHg or $\pm 3\%$ (whichever is greater) exclusive of transducer

Trended Parameters

	PCCO, p-SVI, SWV, PVPI, GEF, PCCI, p-SVRI, EVLWI, GEDVI, p-SVR
Trend Duration	24 hours for Delta, Delta XL, Kappa

Alarms	User selectable alarm limits for PCCO and PCCI
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Product Specifications

Connectors	Four invasive pressures, C.O.
Power source	Powered from monitor

Dimensions

Length	205 mm (8.1 in.)
Width	60 mm (2.3 in.)
Height	140 mm (5.5 in.)
Weight	0.9 kg (1.9 lbs)

Environmental Requirements

Temperature range	
Operating	5°C to 45°C
Storage	-20°C to 60°C

Humidity	
Operating	10% to 95%, non-condensing
Storage	10% to 95%

Pressure range	
Operating	485 to 795 mmHg (70 to 106 kPa)
Storage	375 to 795 mmHg (50 to 106 kPa)

Standards

MDD 93/42/EEC, Appendix I; EN60601-1/1990, A1/1993, A2/1995; EN60601-1-2/2001; IEC 529:1989. The PiCCO pod complies with Medical Devices Directive (MDD) 93/42 EEC and bears the CE mark.

¹ EVLW, EVLWI, PVPI and dPmax not available in the United States

² Extra Vascular Thermal Volume Index (ETVI) only available in the United States

³ Measured using synthetic and/or database waveforms (laboratory testing)

Ordering Information

Infinity PiCCO pod kit MS16734
Includes:
PiCCO Pod (universal pole mount and pod communication cable included)
C.O. Catheter Cable
C.O. Thermistor Cable
C.O. Intermediate Cable
HemoPod Adapter
PULSION to HemoPod Adapter Cable

Note: the Siemens SC 7000/SC 8000/SC 9000XL monitors with a software level below VF4 and the following hardware revision require a memory expansion board:
Siemens SC 7000 below 14, SC 8000 below 17, SC 9000XL below 6

Memory expansion board 74 94 557
for Siemens SC 7000, SC 8000 and SC 9000XL

Procure from PULSION

Blood Pressure Transducer Kits
PULSION PV8115, PV8103 and PV8115CVP kits include PV4046 injectate temperature sensor housing

PULSIOCATH arterial thermodilution catheters for
Femoral artery
Brachial artery (adult only),
Axillary artery (adult only)
Radial* artery (adult only)
* not available in U.S.

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The quality management system at Dräger Medical Systems, Inc. is certified according to ISO 13485, ISO 9001 and Annex II of Directive 93/42/EEC (Medical devices).

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The Infinity PiCCO SmartPod requires 510(k) review and is not yet available commercially in the US.

The Infinity PiCCO SmartPod is not licensed in accordance with Canadian Medical Device Regulations.