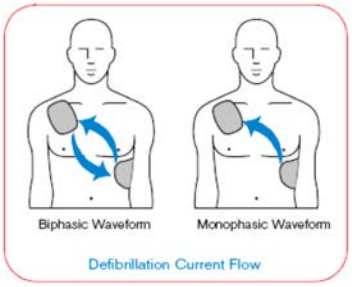
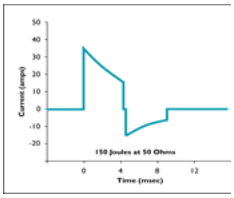
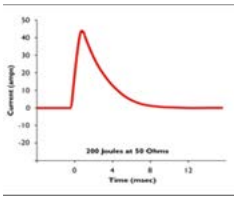
Questions and Answers

Question: **Which defibrillation waveforms can Impulse 6000D/7000DP test?**
Answer: Monophasic waveforms used in the legacy defibrillators, biphasic waveforms in most of today's technology, as well as pulsed biphasic waveform, an emerging new technology.

Question: **What is the main difference between monophasic and biphasic waveforms**?
Answer: The basic difference is the direction of current flow between the defibrillation pads. With a monophasic waveform, the current flows in only one direction. With a biphasic waveform, the current flows in one direction, then reverses and flows in the opposite direction. Lower energy is used in biphasic waveforms.




Biphasic


Monophasic

Question: **Are all biphasic waveforms alike?**
Answer: No. Different waveforms perform differently depending on their shape, duration, voltage, current, and response to impedance. Different biphasic waveforms are designed to work at different energies. Impulse 6000D/7000DP measures the monophasic waveforms used in the legacy defibrillators, biphasic waveforms used in current technology, as well as pulsed-biphasic waveforms, an emerging technology.

Question: **Does Impulse 7000DP test both transcutaneous and transvenous pacers?**
Answer: Impulse 7000DP tests the full function of transcutaneous pacers, but not transvenous pacers. For transvenous pacer testing, try the SigmaPace 1000 or DALE400 analyzers.

Question: **How does the Ansur plug-in work**?
Answer: When combined with the high-end functionality improvements of the Ansur test automation system, your Fluke Biomedical analyzer provides a solution-based approach to complete analysis of the medical device under test. Fluke Biomedical test equipment with Ansur automation solutions create standard work using test templates/sequences based on customer's written test procedures, manage test procedures by allowing both manual and visual automated test sequences, and integrates all test results into a single test report, which can be printed or archived.

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Ansur also comes with generic test procedures to allow the customer to begin working immediately.

Question: **What is the purpose of the fan located on the back of the Impulse 6000D/7000DP?**

Answer: The fan on the back of Impulse 6000D/7000DP is controlled by a thermostat IC. The thermostat utilizes an on/off control (i.e., not linear or continuous control). The thermostat IC is located next to the defibrillator load resistor.

There are two temperature thresholds. The lower threshold is set at about 40° C (104° F) and the upper threshold is set at about 50° C (122° F). When the temperature exceeds the low threshold, the fan turns on. When the temperature exceeds the upper threshold, a warning message is displayed and the unit will not make any further measurements until the temperature has dropped below the upper threshold.

Question: **Why do I get accurate reading when testing pacer function on the ZOLL M series defibrillator/External Pacer, but inaccurate reading when testing on the ZOLL PD1400 by selecting ZOLL MEDICAL Algorithm from Impulse 7000?**

Answer: ZOLL M Series and PD14000 use different algorithms to output pacing function. The default ZOLL MEDICAL pacer selection in Impulse 7000 uses ZOLL M Series algorithm to detect pacer output from ZOLL pacers. We recommend that customer choose ZOLL MEDICAL brand under Impulse 7000 PACER testing function when testing ZOLL M Series, but choose DEFAULT ALGORITHM when testing ZOLL PD14000 to get accurate readings.

Question: **How can I properly test internal paddles used with defibrillators in surgery? Should I use conductive gel?**

Answer: Testing defibrillator energy delivery using internal paddle electrodes, which typically have a curved shape unlike external paddles whose electrodes are flat, is best done using the special internal discharge paddle contacts accessory.

Part Number: 3065438

Description: Internal discharge paddle contacts (set of 2)

Do not use conductive gel when testing internal discharge defibs; the same applies to external discharge adhesive electrodes. The conductive electrolytic gel is only used on patients to improve the contact to the external paddles. The analyzer has very low-resistance contacts that do not require gel.

Clinically, the non-sterile conductive gel is never used inside the patient's thoracic

cavity during open heart procedures with the internal discharge paddles. The internal discharge paddle adapters for the Impulse 7000 can be eTO2 gas sterilized and used on sterilized internal discharge paddles, but non-sterile adapters may be used on non-sterilized internal discharge paddles as a pre-test prior to the sterilization process of the paddles.

IMPORTANT NOTE: These adapters cannot be steam sterilized, as it creates too much heat for the plastic parts.