Function Tester **DP-600**

Test system for function tests of defibrillators, external cardiac pacemakers and ECG simulation in accordance with IEC 60601-2-4 / IEC 60601-2-31

- ☑ single-, dual- and triple-circuit cardiac pacemakers
- ☑ polarity-independent measurement of defi-impulses
- ☑ graphical display of the discharge plot
- ☑ touchscreen or PC control
- ☑ ECG output for all ECG standard leads
- ☑ stop clock function for charge and discharge times
- ☑ asynchron-, synchron- and AED testing
- ☑ user specific language settings

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Management System ISO 9001:2015
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 0910095181

Technical Data

Line voltage:	18 V (external power supply) or internal accumulator operation
Rated capacity:	max. 25 VA
Protection class:	internal power supply
Environmental temperature:	+ 5 - + 40 °C
Storage temperature:	- 10 - + 50 °C
Function:	
DEFI	asynchronous, synchronous, biphasic
Load resistance:	50 Ohm
Measurement range:	Range1 ± 850 V Range2 ± 4400 V 0 – 80 A 0 – 1000 J
Sensitivity:	1 V
Measurement duration:	48 ms, dt 20 µs (50,0 kHz)
Display:	6, 12, 24, 48 ms
PACE	transthoracic, intracardiac
Load resistance:	50 – 1600 Ohm in 50 Ohm steps
Measurement range:	Range1 ± 30 V Range2 ± 300 V
Frequency measurement:	30 - 1200 BPM
Delay time:	5 - 400 ms
Demand frequency:	55 - 100 BPM
Inhibition frequency:	55 - 100 BPM
Refractory time:	50 - 400 ms
Sensitivity:	0,5 - 25 mV
Measurement duration:	2148 ms, dt 33 µs (30,3 kHz)
Display:	8, 16, 32, 64 ms
ECG	12 channel ECG
Pulse forms:	sine, sine square, triangle, rectangle, trapeze, ISO, ventricular fibrillations (VF), ventricular tachycardia (VT), line frequency, NSR
Digital display:	4,3“ TFT-Display
Operation:	Touchscreen
Interface:	1 x USB 3.0, without charging function

Measurement	Range	Error
DEFI		
Load resistance:	50 Ohm	± 1 %
Energy	0 – 1000 Joule	± 1 Joule or ± 1 % of measurement value
Pulse width:	0 – 48 ms	± 0,1 ms or ± 2 % of measurement value
Pulse delay time:	0 – 100 ms	± 0,1 ms or ± 2 % of measurement value
PACE		
Load resistance:	50 -150 Ohm	± 2 %
	200 -1600 Ohm	± 1 %
Pulse voltage:	0,5 - 300 V	± 0,1 V or ± 5 % of measurement value
Pulse length:	0,1 – 250 ms	± 1 ms or ± 5 % of measurement value
Frequency measurement:	30 – 1200 BPM	± 1 BPM or ± 0,5 % of measurement value
ECG amplitude:	1 - 25 mV	± 5 %
Delay time:	5 - 400 ms	± 5 %
Demand frequency:	55 - 100 BPM	± 1 %
Inhibition frequency:	55 - 100 BPM	± 1 %
Refractory time:	50 - 400 ms	± 10 %
Sensitivity:	0,5 - 25 mV	± 10 %
Time Measurement:	1 – 1000 sec	± 1 %

Testing device connection:	
DEFI	2 Paddle sensor components with integrated 4 mm sockets
PACE	6 x 4 mm sockets
ECG	10 x 4 mm sockets
Accessories:	1 x charger 10 x STA8 ECG adapter clip 1 x USB cable type A
Mechanical data:	Light weight metal case IP20
Dimensions:	330 x 250 x 90 mm (W x H x D)
Weight:	approx. 2,5 kg
Selectable languages:	german, english, french, polish, spanish, italian, portuguese, turkish

The DP-600 is a test system for functional tests of defibrillators, external cardiac pacemakers and serves as a test signal generator for ECG pulses. It can be operated by either a power adapter or with internal accumulators. Moreover, it can be used as a stand-alone device, but also in connection with the PC.

The DP-600, as a defibrillator testing device, can be used for functional testing of external monophasic, biphasic and pulsed biphasic defibrillators. The delivered defibrillator energy is measured on a load resistance of 50 Ohm. Furthermore, the voltage curve can be graphically displayed. The tests can be done polarity independent in the synchronous and asynchronous mode. The synchronous mode differs between paddle-synchronous and monitor-synchronous defibrillation.

The DP-600, as a cardiac pacemaker testing device, can be used for functional testing of external single, dual or triple circuit cardiac pacemakers for intracardiac or transthoracic stimulation, operating with asynchronous or demand pulses. The pulse amplitude, the pulse time, the pulse frequency and the delay time (AV / VV) are determined. Furthermore, the voltage curve can be graphically displayed. The refractory time, sensitivity as well as the demand and inhibition frequency are automatically determined based on the generated test signal.

The ECG simulation serves to output ECG pulses to defibrillators and ECG devices.

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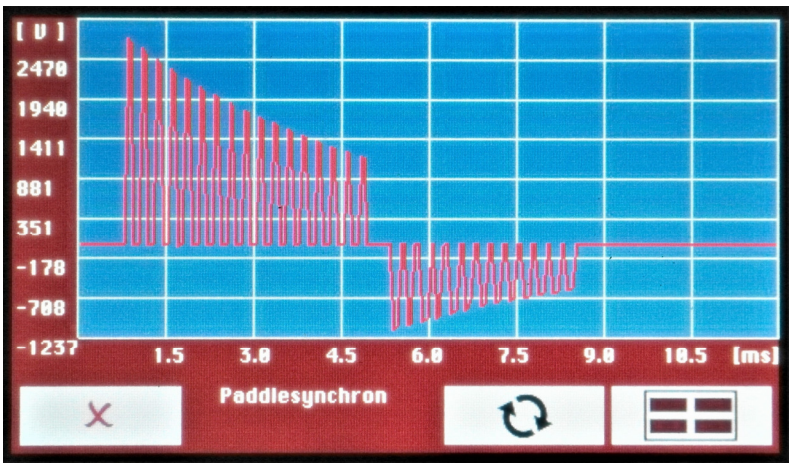
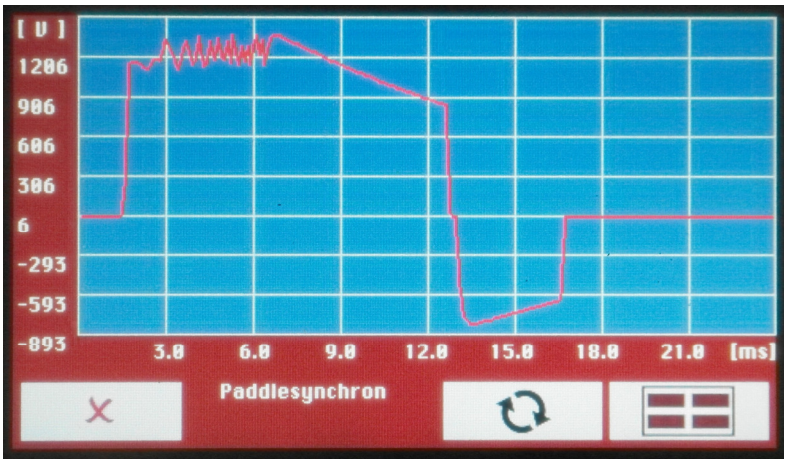
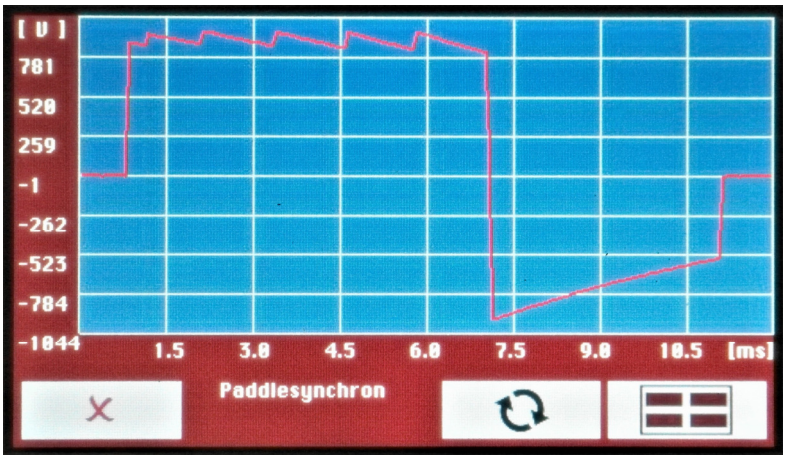
Technical Data

	Discharge plot of Schiller FRED easy
	Discharge plot of PRIMEDIC HeartSave PAD
	Discharge plot of ZOLL MSeries Biphasisch

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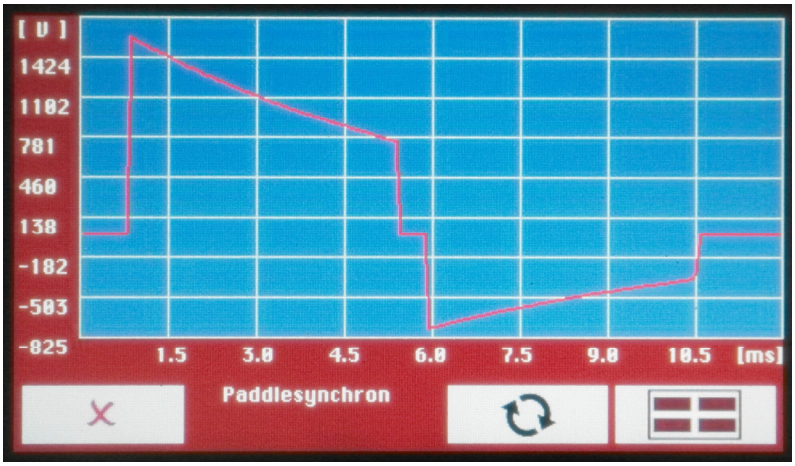
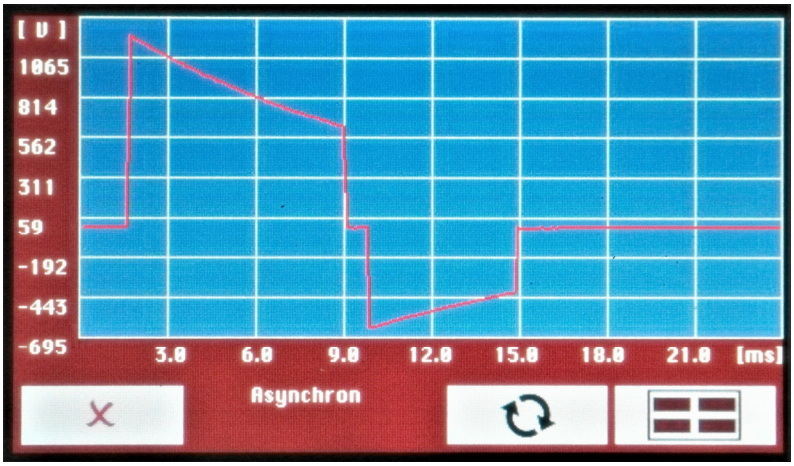
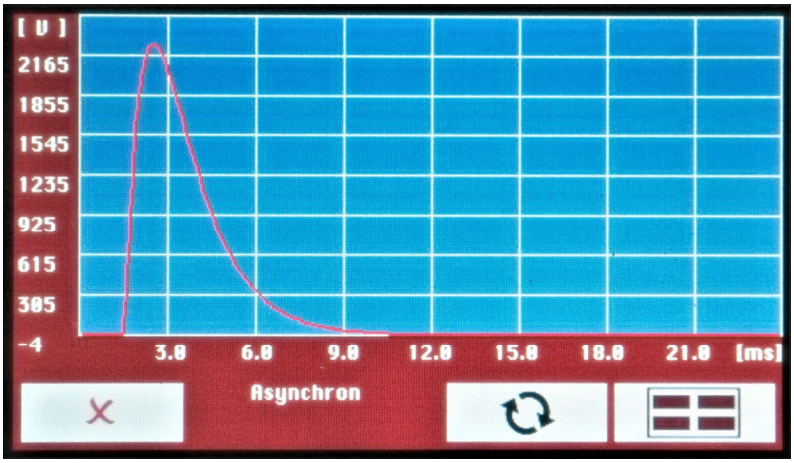
Technical Data

	Discharge plot of Philips Heart Start
	Discharge plot of LIFEPAK 12
	Discharge plot of LIFEPAK 10

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