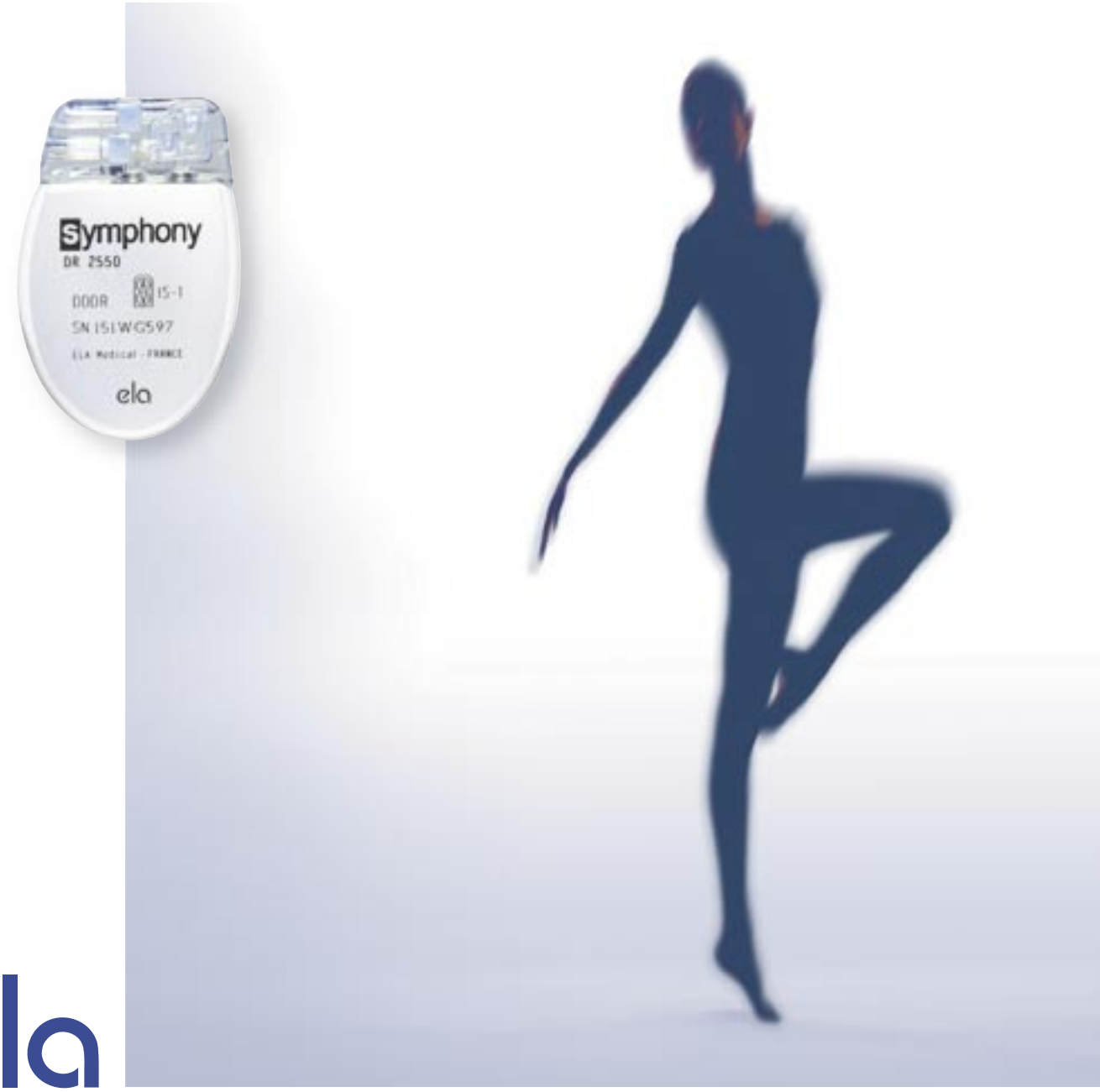
Technical specifications

Symphony DR

2550 model
DDDR Cardiac pacemaker



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Programmable parameters

Symphony DR model 2550

Basic parameters	
Mode	**DDD** - AAIsafeR - DDD/AMC - DDTA - DDTV - DDTAV - VDD - DDI - DOO - VVI - VVT – VOO - AAI - AAT - AOO
Basic rate	30 - 40 - 45 - 50 - 55 - **60** - 65 - 70 - 75 - 80 - 85 - 90 - 95 min^{-1}
Rest rate	50 - 55 - 60 - 65 - 70 - 75 - 80 - 85 - 90 - 95 min^{-1}
Maximum tracking rate	100 - 110 - **120** - 130 - 140 - 155 - 165 - 175 - 185 min^{-1}
Hysteresis	**0** - 5 - 10 - 20 - 35 %
Rest AV delay	30 - 45 - 65 - 80 - 95 - 110 - 125 - 140 - **155** - 170 - 190 - 205 - 220 - 235 - 250 ms
Exercise AV delay	30 - 45 - 65 - **80** - 95 - 110 - 125 - 140 - 155 - 170 - 190 - 205 - 220 - 235 - 250 ms
AV delay extension	0 - 15 - 30 - 45 - **65** - 80 - 95 - 110 - 125 ms
Pacing and sensing parameters	
Atrial and ventricular amplitude	1.5 - 2.0 - 2.5 - 3.0 - **3.5** - 4.0 - 5.0 - 7.5 V
Atrial and ventricular pulse width	0.10 - 0.25 - **0.35** - 0.50 - 0.60 - 0.75 - 0.85 - 1.00 ms
Atrial sensitivity	0.1 - 0.3 - 0.4 - 0.6 - 0.8 - **1.0** - 1.2 - 1.5 - 1.8 - 2.0 - 2.2 - 2.5 - 2.7 - 3.0 - 3.5 - 4.0 - 4.5 - 5.0 - 6.0 mV
Ventricular sensitivity	1.0 - 1.2 - 1.5 - 1.8 - 2.0 - 2.2 - **2.5** - 2.7 - 3.0 - 3.5 - 4.0 - 4.5 - 5.0 - 6.0 - 8.0 - 10.0 - 15.0 mV
Atrial and ventricular sensing polarity	**Unipolar** - Bipolar
Atrial and ventricular pacing polarity	**Unipolar** - Bipolar
Special features	
Fallback Mode Switching (FMS)	**ON** - OFF
PMT protection	Termin - **Reprog**
Rate smoothing	**OFF** - Very slow - Slow - Medium - Fast
Acceleration	0 - 5 - 15 - 25 - 35 - 45 %
AV-delay shortening	0 - 15 - 30 - 45 - 65 - 80 - 95 - 110 ms
Atrial or ventricular Autosensing	Auto - **Monitor**
Ventricular Autothreshold	Auto - Monitor - **OFF**
Min. ventricular amplitude	1.5 - 2.0 - 2.5 - 3.0 - 3.5 V
Pause max AAIsafeR	2 - 3 - 4 s
Post Ventricular Atrial Blanking (PVAB)	**150** - 165 - 180 - 195 - 210 - 225 - 240 - 255 ms
AF prevention	
Overdriving	ON - **OFF**
Max overdriving rate	100 - 110 - 130 - 155 - 185 min- 1
Pause suppression	A - V - A+V - **OFF**
PAC acceleration	ON - **OFF**
Rate-responsive parameters	
Sensor choice	MV+G - MV - G
Rate responsive mode	**OFF** - Learn - RR auto - RR fixed - DDD/DDIR auto - DDD/DDIR fixed
Physical exercise	Very low - Low - Medium - High - Very high

Non programmable parameters

Committed period	95 ms
Rate limit	195 min^{-1}
Magnet rate (BOL / ERI)	96 min^{-1} / 80 min^{-1}
Refractory periods	Automatic

***As shipped values** are written in **bold**.*

Physical characteristics

Dimensions : ..... 53.1 x 36.2 x 6.4 mm
Weight : .....24 g
Volume : .....10.5 cm^3
Connector : .....IS-1 3.2 mm bipolar (unipolar compatible)
Longevity : .....104 months until ERI (CENELEC conditions: 100% pacing in DDDR - 70 min^{-1} at 2.5V - 0.5 ms - 500 Ω).

Follow-up functions

Patient data

Battery status:
- magnet rate,
- battery impedance,
- battery curve.

A and V leads **impedance**,
Atrial and ventricular **pacing threshold** test with simultaneous transmission of intracardiac ECG,

Automatic measurement of **P and R amplitudes**.

Simultaneous transmission of **intracardiac ECG** and markers (A, V, A+V),
Temporary programming.

NIPS (Electro-physiologic studies):
A burst, V burst, extra-stimuli sequences.

Monitoring of the rate-responsive function:
Automatic recording of sensor data during 20 minutes and simulation of the sensor response.

24-hour follow-up:
AIDA+ diagnostic data over 24 hours, hour by hour.

Programming help (CLIP).

AIDA+ Diagnostics

(Automatic Interpretation for Diagnosis Assistance)

Automatic analysis of stored data:
help messages supported by graphical data.

Reprogramming proposals for pacemaker functioning optimisation.

Up to **7 minutes** of intracardiac A+V ECG, 512 Hz sampling rate.
31 stored episodes (Mode switching, atrial bursts, ventricular bursts and switches in AAIsafeR mode) with annotated markers, synchronised with intracardiac ECG.

Day by day evolution over 6 months:
- of A and V rate and pacing %,
- of atrial arrhythmias (number and time in mode switch, bursts, extrasystoles),
- of ventricular bursts and extrasystoles.

Statistics

Other information:
- pacing threshold follow-up,
- amplitudes of normal and pathologic P and R waves,
- 24-hour heart rate curve,
- Sensor accelerated cycles according to their rate.

AIDA+ interrogation time is less than one minute.

E5850403 - MCP - Photo JLP - 06/03 - réf. :XZA701

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