## Implantable Cardioverter Defibrillator (ICD) Devices

## Current<sup>™</sup>+ VR

## Single-Chamber Implantable Cardioverter Defibrillator (ICD)

## **Product Highlights**

- The DF4 connector is designed to simplify implants by streamlining defibrillation connections into a single terminal pin and reducing the number of set screws
- Triple redundancy safety platform is designed to minimise risk and increase security and patient comfort through multiple hardware and software system safeguards
- Vibratory patient notifier enables patients with hearing problems to be alerted to a low battery, lead-related complications and more
- DeFT Response<sup>™</sup> technology offers the most noninvasive options for managing high DFTs
- The Sense Ability™ feature provides the flexibility to fine-tune programming around T-wave oversensing without decreasing sensitivity
- Automatic daily high-voltage lead integrity test is designed to ensure optimal patient safety





## **Ordering Information**

Contents: Cardiac pulse generator

| Model<br>Number | Dimensions<br>(H x W x T, mm) | Weight (g) | Volume (cc) | Connector<br>Defibrillation | Connector<br>Sense/Pace |
|-----------------|-------------------------------|------------|-------------|-----------------------------|-------------------------|
| CD1211-36       | 76 x 50 x 14                  | 79         | 42          | DF1                         | IS-1                    |
| CD1211-36Q      | 74 x 50 x 14                  | 79         | 41          | DF4                         | DF4                     |

Indications: The devices are intended to provide ventricular antitachycardia pacing and ventricular defibrillation for automated treatment of life-threatening ventricular arrhythmias.

**Contraindications:** Contraindications for use of the pulse generator system include ventricular tachyarrhythmias resulting from transient or correctable factors such as drug toxicity, electrolyte imbalance, or acute myocardial infarction.

Adverse Events: Implantation of the pulse generator system, like that of any other device, involves risks, some possibly life-threatening. These include but are not limited to the following: acute hemorrhage/bleeding, air emboli, arrhythmia acceleration, cardiac or venous perforation, cardiogenic shock, cyst formation, erosion, exacerbation of heart failure, extrusion, fibrotic tissue growth, fluid accumulation, hematoma formation, histotoxic reactions, infection, keloid formation, myocardial irritability, nerve damage, pneumothorax,

thromboemboli, venous occlusion. Other possible adverse effects include mortality due to: component failure, device-programmer communication failure, lead abrasion, lead dislodgment or poor lead placement, lead fracture, inability to defibrillate, inhibited therapy for a ventricular tachycardia, interruption of function due to electrical or magnetic interference, shunting of energy from defibrillation paddles, system failure due to ionising radiation. Other possible adverse effects include mortality due to inappropriate delivery of therapy caused by: multiple counting of cardiac events including T waves, P waves, or supplemental pacemaker stimuli. Among the psychological effects of device implantation are imagined pulsing, dependency, fear of inappropriate pulsing, and fear of losing pulse capability.

Refer to the User's Manual for detailed indications, contraindications, warnings, precautions and potential adverse events.

 $\textbf{Customer Support:}\ 46\text{--}8\text{--}474\text{--}4756$ 

Brief Summary: Prior to using these devices, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions, potential adverse events and directions for use. Devices depicted may not be available in all countries. Check with your St. Jude Medical representative for product availability in your country. Unless otherwise noted, ™ indicates that the name is a trademark of, or licensed to, St. Jude Medical or one of its subsidiaries. ST. JUDE MEDICAL, the nine-squares symbol and MORE CONTROL. LESS RISK. are registered and unregistered trademarks and service marks of St. Jude Medical, Inc. and its related companies. ©2011 St. Jude Medical, Inc. All rights reserved.



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Single-Chamber Implantable Cardioverter Defibrillator (ICD)

## **Product Specifications**

| PHYSICAL SPECIFICATIONS         |                                  |                                  |
|---------------------------------|----------------------------------|----------------------------------|
| Models                          | CD1211-36                        | CD1211-36Q                       |
| Telemetry                       | RF                               | RF                               |
| Delivered/Stored Energy (J)     | 36/42                            | 36/42                            |
| Volume (cc)                     | 42                               | 41                               |
| Weight (g)                      | 79                               | 79                               |
| Size (mm)                       | 76 x 50 x 14                     | 74 x 50 x 14                     |
| Defibrillation Lead Connections | DF1                              | DF4                              |
| Sense/Pace Lead Connections     | IS-1                             | DF4                              |
| High-Voltage Can                | Electrically active titanium can | Electrically active titanium can |

| PARAMETERS                        | SETTINGS  |
|-----------------------------------|---|
| Sensing/Detection                 |   |
| Sense <i>Ability</i> ™ Technology | Automatic Sensitivity Control adjustment for ventricular events       |
| Threshold Start                   | (Post-Sensed; Ventricular) 50; 62,5; 75; 100%;                        |
|                                   | (Post-Paced, Ventricular) Auto; 0,2-3,0 mV                            |
| Decay Delay                       | (Post-Sensed/Post-Paced; Ventricular) 0-220;                          |
|                                   | (Post-Paced Ventricular) Auto   |
| Ventricular Sense Refractory (ms) | 125; 157  |
| Detection Zones                   | VT-1; VT-2; VF  |
| SVT Discriminators                | Sudden Onset; Interval Stability; Morphology Discrimination (MD) with |
|                                   | Manual or Automatic Template Update                                   |
| Reconfirmation                    | Continuous sensing during charging                                    |

#### **Antitachycardia Pacing Therapy**

| ATP Configurations           | Ramp; Burst; Scan; 1 or 2 schemes per VT zone |
|------------------------------|---|
| Burst Cycle Length           | Adaptive; Readaptive or Fixed                 |
| Min. Burst Cycle Length (ms) | 150-400 in increments of 5                    |
| Number of Bursts             | 1-15  |
| Number of Stimuli            | 2-20  |
| Add Stimuli per Burst        | On; Off                                       |
|                              |   |

### High-Voltage Therapy

| High-Voltage Output Mode | Fixed Pulse Width; Fixed Tilt |
|--------------------------|-------------------------------|
| Waveform                 | Biphasic; Monophasic          |
| RV Polarity              | Cathode (-); Anode (+)        |
| Electrode Configuration  | RV to Can; RV to SVC/Can      |

#### Bradycardia Pacing

| Permanent Modes              | Off; VVI(R); VOO(R)        |
|------------------------------|----------------------------|
| Temporary Modes              | Off; VVI; VOO              |
| Rate-Adaptive Sensor         | On; Off; Passive           |
| Programmable Rate Parameters | Off Rase Rate (min-1) - Re |

; Rest Rate (min-1); Maximum Sensor Rate (min-1); Pulse Amplitude (RV) (V); Pulse Width (RV) (ms); Hysteresis Rate (min-1); Rate Hysteresis with Search

#### Post-Therapy Pacing (independently programmable from Bradycardia and ATP)

| Post-Shock Pacing Mode           | Off; VVI                        |
|----------------------------------|---------------------------------|
| Post-Shock Base Rate (min-1)     | 30-100 in increments of 5       |
| Post-Shock Pacing Duration (min) | Off; 0,5; 1; 2,5; 5; 7,5; or 10 |

### Device Testing/Induction Methods

| DC Fibber™ Pulse Duration (sec) | 0, |
|---------------------------------|----|
| Burst Fibber Cycle Length (ms)  | 20 |

Noninvasive Stimulation (NIPS)

### **Patient Notifiers**

| Electrograms and Diagnostics Stored Electrograms | Up to 45 minutes including up to 1 minute programmable pre-trigger  |
|--|---|
| Time Between Notifications (hours)               | 10; 22  |
| Number of Notifications                          | 1-16  |
| Number of Vibrations per Notification            | 2   |
| Vibration Duration (sec)                         | 2; 4; 6; 8; 10; 12; 14; 16  |
| Entry into Backup VVI Mode                       | On  |
| Device Parameter Reset                           | On  |
| Programmable Notifiers (On; Off)                 | Device at ERI; Charge Time Limit Reached; Possible HV Circuit Damage;<br>Ventricular Lead Impedance Out of Range; High-Voltage Lead Impedance<br>Out of Range; Backup VVI; Long AT/AF Episode |

| <b>Electrograms and Diagnostics</b> |  |
|-------------------------------------|--|
| Stored Electrograms                 | Up to 45 minutes including up to 1 minute programmable pre-trigger data per VT/VF diagnosis/detection electrograms; triggers include: diagnosis; therapy; PC shock delivery; noise reversion; magnet reversion; and morphology template verification |
| Therapy Summary                     | Diagram of therapies delivered   |
| Episodes Summary                    | Directory listing of up to 60 episodes with access to more details including stored electrograms   |
| Lifetime Diagnostics                | History of bradycardia events and device-initiated charging  |
| Ventricular HV Lead Impedance Trend | Multi-Vector Trend Data  |
| Histograms                          | Event Histogram; Ventricular Heart Rate Histogram; Exercise and<br>Activity Trending   |
| Real-Time Measurements (RTM)        | Pacing lead impedances; high-voltage lead impedances; unloaded battery   |

voltage; and signal amplitudes

| Pulse Duration (sec) | 0,5-5,0                                |
|----------------------|--|
| r Cycle Length (ms)  | 20-100                                 |
| e Programmed         | 2-25 stimuli with up to 3 extrastimuli |

