





Single chamber pacemaker system

vitatron • The Pace Makers

G20SR

Specifications

Model G20A1

Single chamber pacemaker system

Mechanical

Model Size (HxWxD mm) M (g) V (cc) Connector Radiopaque ID G20A1 40.2x42.9x7.5 21.5 9.7 IS-1 BI or UNI VG

10.4 years*

Battery

TypeLithium-iodineVoltage2.8 VAverage projected capacity.92 Ah

Longevity

Bradycardia Pacing

Programmable parameters VVIR, VVI, VVT, VOOR, VOO, AAIR, AAI, Pacing Modes AAT, AOOR, AOO, OVO, OAO Lower Rate 30, 35, 40...60...170, 175 ppm (exc. 65, 85) Upper Sensor Rate 80, 90, 95...130...180 ppm A and RV Pulse Amplitude^a 0.5, 0.75, 1.0...3.5...4, 4.5, 5, 5.5, 6.7.5V A and RV Pulse Width 0.12, 0.15, 0.21, 0.27, 0.34, 0.4, 0.46, 0.52, 0.64, 0.76, 1, 1.25, 1.5 ms 0.25, 0.35, **0.5**, 0.7, 1, 1.4, 2, Atrial Sensitivity 2.8, 4 mV Ventricular Sensitivity 1, 1.4, 2, 2.8, 4, 5.6, 8, 11.2 mV Pacing Polarity (A and V) Bipolar, Unipolar, Configure Bipolar, Unipolar, Configure Sensing Polarity (A and V) Atrial Refractory Period 180, 190, 200...**250**...500 ms Atrial Blanking Period 130, 140, 150...180...350 ms Ventricular Refractory Period 150, 160, 170...330...500 ms

Therapies to promote intrinsic activation Sleep On, Off

 Sleep Rate
 30, 35, 40...50...90 ppm (exc. 65, 85)

 Bed Time
 00:00, 00:15, 00:30...

 22:00...23:45
 Wake Time

 Wake Time
 00:00, 00:15, 00:30...

 8:00...23:45
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Single Chamber Hysteresis

Rate Response Pacing

ADL Rate Rate Profile Optimization ADL Response Exertion Response Activity Threshold Acceleration Deceleration 60, 65, 70...95...175, 180 ppm On, Off 1, 2, 3, 4, 5 1, 2, 3, 4, 5 Low, Medium Low, Medium High, High 15 s, 30 s, 60 s 2.5 min, 5 min, 10 min, Exercise

Atrial Tachyarrhythmia Therapies and Interventions Conducted AF Response^b

Regularize V-V during AT/AF On, **Off** Maximum Rate (ppm) 80, 85, 90...**110**...130

Automatic Pacing, Sensing, and Lead Monitor Implant Detection and Initialization

At the completion of the 30-minute Implant Detection period, Rate Profile Optimization is enabled; the appropriate pacing and sensing polarities are automatically selected by the device; Ventricular Output Management is enabled and Amplitude and Pulse Width become adaptive. Sensing Assurance[™] is enabled and Sensitivity becomes adaptive.

Implant Detection Lead Monitor (A and V)

Notify If <

Notify If >

Monitor Sensitivity

On/Restart, Off/Complete Configure, Monitor Only, Adaptive (Auto Polarity Switch), Off **200** Ω 1000, 2000, 3000, **4000** Ω 2, 3, 4 ... **8**... 16

Ventricular Output Management

Ventricular Output Management Off, Monitor Only, Adaptive Amplitude Margin 1.5x, 2x, 2.5x, 3x, 4x (times) Minimum Adapted Amplitude 0.5, 0.75...**2**...3.5 V Capture Test Frequency 15. 30 min: 1. 2. 4. 8. 12 hours: Day at rest; Day at ...; 7 days at Capture Test Time 00:00, 1:00...23:00 Acute Phase Days Remaining Off, 7, 14, 21...84, 112, 140, 168... 252 days V. Sensing During Search Unipolar, Bipolar, Adaptive

Sensing Assurance

Sensing Assurance (A and V) On, Off

Diagnostics

Cardiac Dashboard II Highlights significant events, AT/AF and pacing summary, threshold and impedance trends Ventricular pacing threshold trends Battery longevity Pacing summary and access to rate histogram Atrial and ventricular lead impedance trends Number of hours/day in atrial arrhythmia, percentage of time Access to AT/AF diagnostics Observations P-wave/R-wave amplitudes and access to A and V sensitivity trends

AT/AF compass trends

Trend data compiles up to 6 months of daily clinical information in an easy-to-interpret graphic format

Histogram reports

Heart rate histograms Sensor indicated rate profile

Atrial and ventricular episodes

High rate episodes Atrial arrhythmia durations Multiple EGM episodes AT/AF duration

Clinician selected diagnostics

Custom rate trend Ventricular output management detail High rate detail

Patient Data Management

Patient data stored in device

Patient identification Leads implanted Device implanted Clinician's stored notes

Data management

Automatic printing of initial interrogation report Full page printing Save-to-Disk capacity for electronic file management

Follow-up and Troubleshooting

Telemetry features	
Transtelephonic monitor	On, Off
Extended telemetry	On, Off
Extended marker	Standard, Therapy Trace
Key parameter history	
Initial interrogation report	
Strength duration threshold t	est
Ventricular threshold test	
Marker Channel™	
Threshold margin test	
Exercise test	
EP studies	
Magnet test	
Underlying rhythm test	
Sensing test	
Temporary test	

Magnet mode operation

	BOS	ERI/RRT
Single chamber atrial mode	AOO 85 ppm	65
Single chamber ventricular mode	VOO 85 ppm	65

ERI-RRT

Initiation date

Recommended Replacement Time (RRT/ERI)

 Replacement message on programmer (Cardiac Dashboard II)

 Battery/lead information
 Replacement message and displayed battery voltage on programmer

 RRT/ERI initiation date
 Displayed on programmer

References

^a Tolerance for amplitudes from 0,5V through 6.0V is ± 10%, and for 7,5V is -20/+0%. Tolerances are based on 37°C and a 500Ω load. Amplitude is determined 200 µs after the leading edge of the pace. ^b Conducted AF Response is functional during WIR modes. *SSIR or SSI, 60 ppm, 100% pacing, 2.0V, 0,4 ms pulse width, 1000Ω pacing impedance.

Nominal values indicated in **bold**

Vitatron. The Pace Makers

Vitatron – based in Europe – is the only medical device company that specializes exclusively in pacemakers. Since 1962, Vitatron pacemakers have helped restore more than 600,000 people in more than 60 countries to a full life. We strive to achieve perfection in everything we do. This results in unique patient-focused therapies, as well as highly cost-effective pacemakers that are easy to use.



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