G20SR Specifications
Model G20A1 Single chamber pacemaker system
Specifications
Single chamber pacemaker system

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

Battery
Type Lithium-iodine
Voltage 2.8 V
Average projected capacity .92 Ah
Longevity 10.4 years*

Bradycardia Pacing
Programmable parameters
Pacing Modes VVIR, VVI, VVT, VOOR, VOO, AAIR, AAI, AAT, AOOR, AOO, VOO, 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* 0.5, 0.75, 1.0…3.5…4, 4.5, 5, 5.5, 6, 7.5 V
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
Atrial Sensitivity 0.25, 0.35, 0.5, 0.7, 1, 1.4, 2, 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
Sensing Polarity (A and V) Bipolar, Unipolar, Configure
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 00:00, 00:15, 00:30…8:00…23:45
Single Chamber Hysteresis Off, 40, 50, 60 ppm

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

Atrial Tachyarrhythmia Therapies and Interventions
Conducted AF Response³
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.

Ventricular Output Management
Remote Activity Monitor 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 test
Ventricular threshold test
Marker Channel™
Threshold margin test
Exercise test
EP studies
Magnet test
Underlying rhythm test
Sensing test
Temporary test

Magnet mode operation

<table>
<thead>
<tr>
<th>Mode</th>
<th>BOS</th>
<th>ERI/RRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single chamber atrial mode</td>
<td>AOO 85 ppm</td>
<td>65</td>
</tr>
<tr>
<td>Single chamber ventricular mode</td>
<td>VOO 85 ppm</td>
<td>65</td>
</tr>
</tbody>
</table>

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
* 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.
* 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.

G20 SR
Single Chamber

Sales Offices:
Vitatron India +91-22 26836733
Vitatron Latin America +1-786 709-4228
Vitatron Europe +31-(0)43 356 6551
Vitatron China +86-(0)21 3861 2000

Vitatron is further represented by dealers throughout the world. All specifications subject to change without notice.