MicroPort™
CRM

ENO

One with Heart.

ENO

One with Heart.

ENO

One with Heart.

1.5T & 3T MR CONDITIONAL PACING SYSTEM

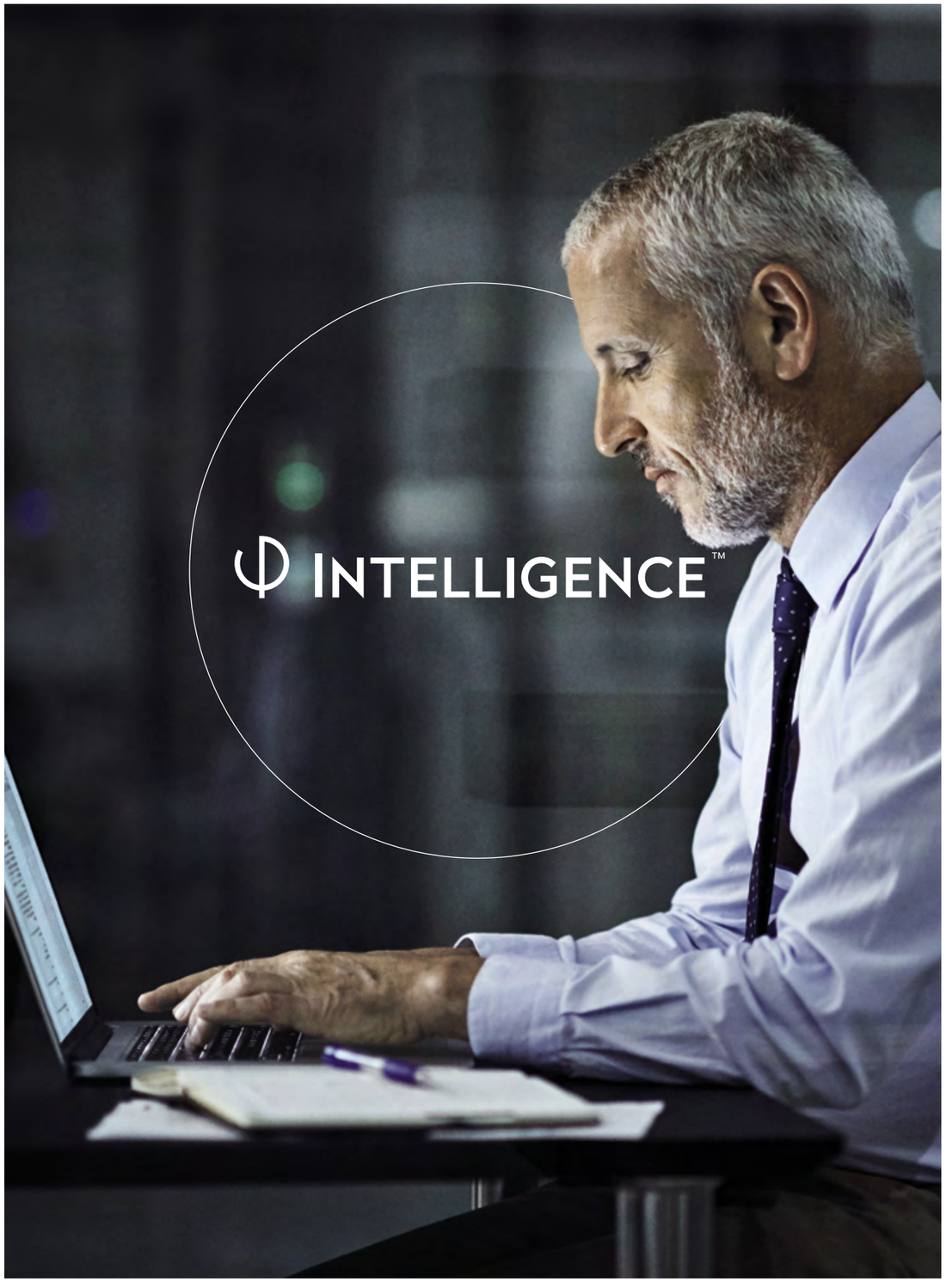
INTELLIGENCE™

AF RISK MANAGEMENT™

RATIO DESIGN™

AUTOMRI™

- Empower AF Risk Management.
- Minimize ventricular pacing for SND and AVB patients.
- Screen and Monitor for Sleep Apnea.



— WHAT IF YOU COULD ALWAYS GIVE THEM THE BEST?

INTELLIGENCE™

Translating the natural beat into engineering excellence.

MICROPORT™ CRM pacemakers are equipped with *Phi Intelligence™*, enabling a physiological response, real time adaptive therapy at rest and during exercise, and simultaneous treatment of multiple pathologies.

Inspired by physicians.
Engineered by MICROPORT™ CRM.

Physio-inspired design.

Mimics the natural way the heart works and minimizes artificial intervention.

[SAFER]™

Reduces unnecessary V pacing to almost 0% for SND & AV Block patients[1] at rest and during exercise.

Warad™

Differentiates between natural and pathological atrial acceleration[2].

[DUAL SENSOR]

Responds more naturally[3] to patient activity thanks to cross-checking sensors.

— WHAT IF YOU COULD ADAPT THEIR THERAPY MINUTE BY MINUTE?

INTELLIGENCE™

Wave to wave thinking.

Permanent adaptive strategy for real time decisions that responds to all levels of patient activity, day and night, evolving and learning with the patient.

[SAFER]™

Adapts AV management during rest and exercise.

Mode Switch

Continuously monitors atrial acceleration cycle by cycle.[2]

[DUAL SENSOR]

Patient activity is monitored and Rest Response is calibrated from implant onwards.[4]

Rest Rate

Real-time detection of sleep.[5]

INTELLIGENCE™

Simultaneous

Key algorithms can be activated individually or simultaneously.

Autonomous

AA detection is entirely autonomous whatever the settings of other functions.

Symbiotic Programming.

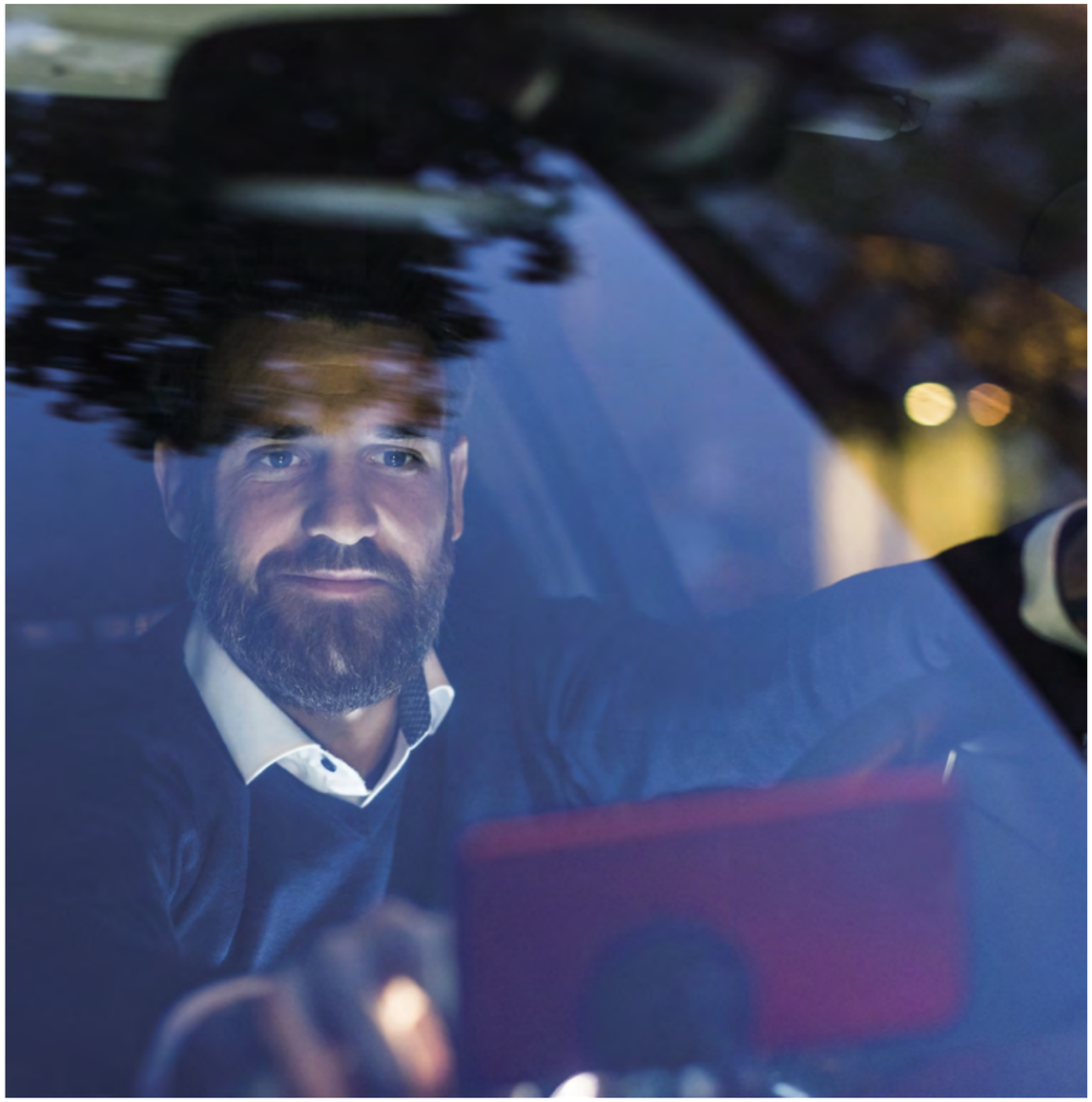
Programming is driven only by hemodynamic needs. All therapeutic features are independently programmable, designed to work simultaneously together with no conflict.

Flexible

No settings interfere with high-intensity exercise.[2]

Efficient

No time wasted optimizing settings to solve programming conflicts.



— WHAT IF YOU DON'T HAVE TO CHOOSE?

AF RISK MANAGEMENT™

Helping you manage...

VP Reduction

— Protect patients from developing AF.[1,6,7]

[SAFER]™

- Reduces unnecessary ventricular pacing to almost 0%[1]
- 23% reduced risk of first-onset AF for all patients at 3 years[6]
- 35% reduced risk of first-onset AF in AV block patients[7]

Atrial prematurity detection

— Accurately detect AF.[2]

Up to 40% of AF patients are asymptomatic[8]

- **Eno™** has automatic AF detection with 96% sensitivity and 96% specificity[2]
- Proven to be effective even in cases of undersensing[9]
- High quality EGMs allow accurate physician analysis and diagnosis

AF RISK MANAGEMENT™

...what can't be seen.

Sleep apnea screening

— Reveal the silent cause of AF.[10,11]

Risk of AF is 4 times higher in patients with sleep apnea[10]

[SAM]™ — Sleep Apnea Monitoring

- Screens and monitors patients for severe sleep apnea
- 85% high specificity and 89% high sensitivity[11]
- Simultaneous display of time spent in AF and sleep apnea severity

AF risk control

— Catch high risk patients on time.[11,12]

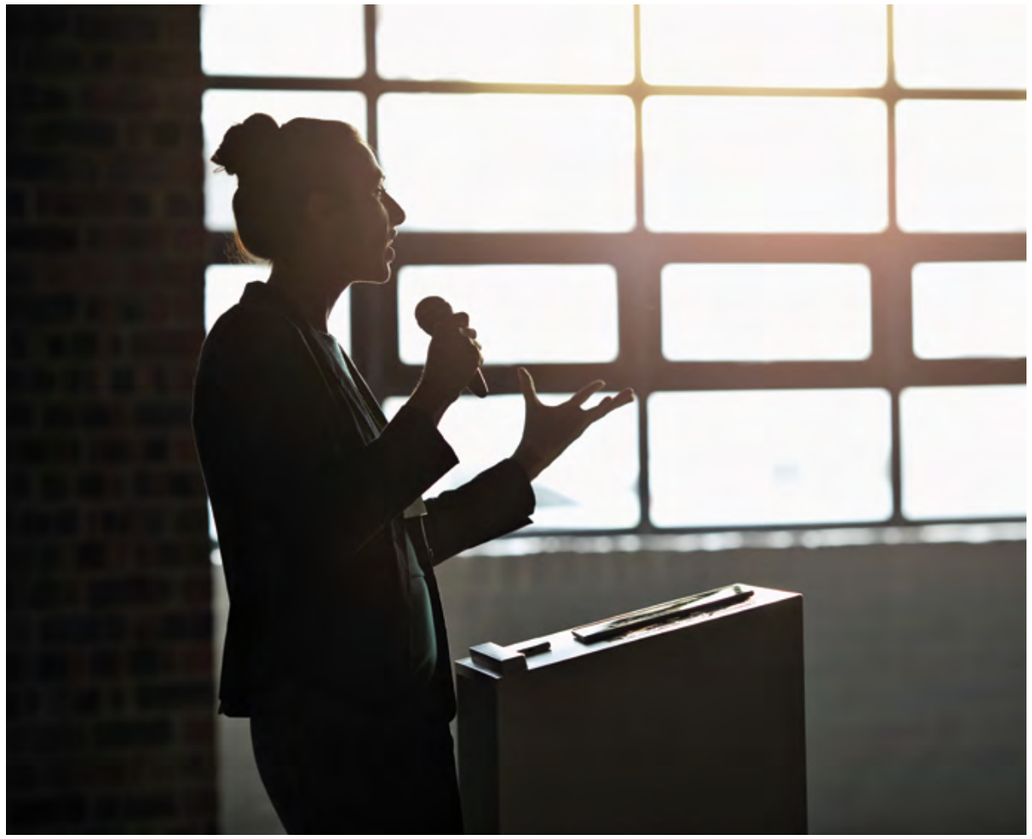
33.5 million AF patients estimated worldwide, expected to increase x3 over the next three decades.[13]

[SAM]™ — Sleep Apnea Monitoring

- Guidelines state that screening for OSA should be considered in all AF patients.[12]
- AF recurrence after ablation reduced by half in treated patients:[14]
  - Untreated OSA: 63% AF recurrence
  - Treated OSA: 28% AF recurrence

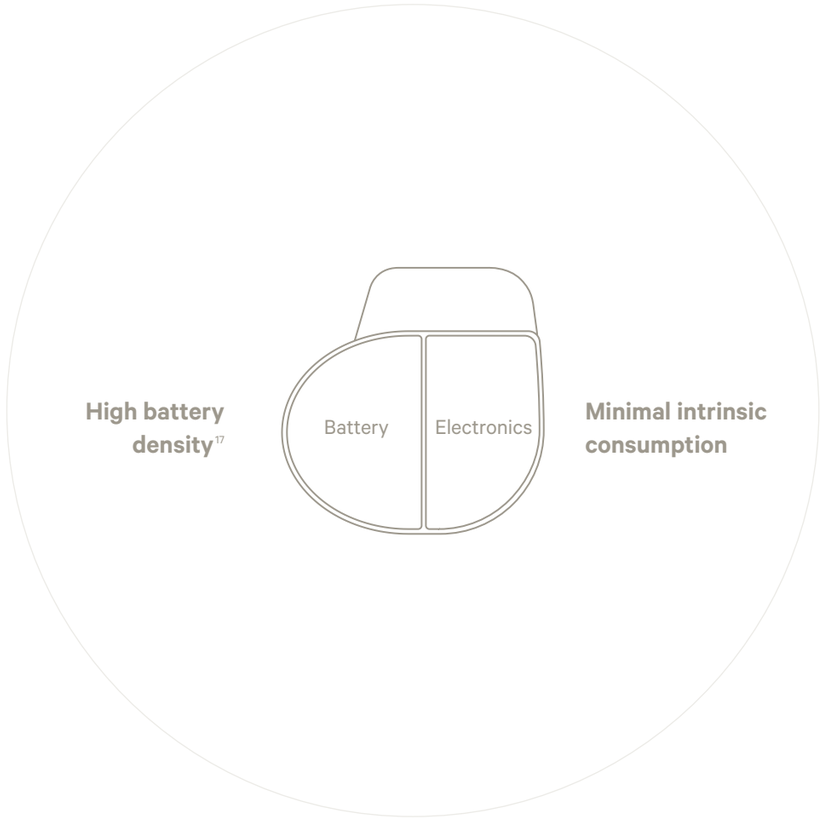
RATIO DESIGN™

Size is golden.



Eno™ is the world's smallest pacemaker* with the best longevity per cc.[15,16] Optimized electronic placement, low intrinsic consumption and ellipse-shape ensure no dead space, allowing MICROPORT™ CRM to achieve the ideal ratio between size, shape and longevity.

Smallest[15] **Lightest**[15] **Best longevity/cc**[16]



8 cc

Favours a smaller incision and reduced pocket size

Facilitates both primo implants and replacements

Boosts psychological adoption for patients

Ellipse Shape

Designed for natural lead wrap around

Facilitates insertion and lead connection

Rounded edges provide greater patient comfort

12 years longevity**

SafeR AV Management increases longevity[18]

Avoid complications due to risky replacement procedures[18,19]

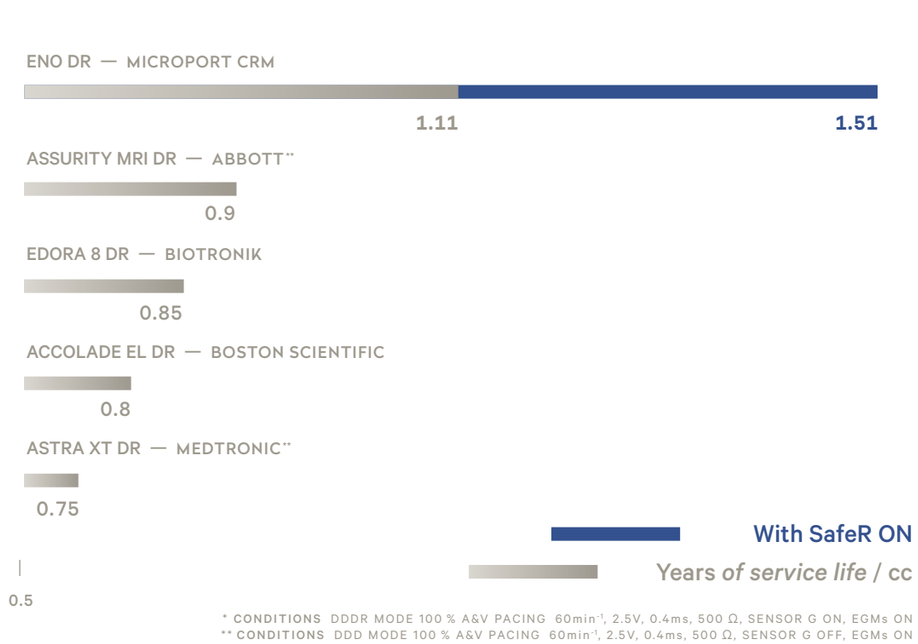
*TRANSVENOUS PACING SYSTEM.
** SAFER MODE (5% V PACING, 50% A PACING), 60min^{-1}, 2.5V, 0,4ms, 750Ω, SENSORS ON, EGM ON.

RATIO DESIGN™

Best longevity / cc.

Comparison across manufacturers based on 100% pacing*,[16] shows that Eno™ delivers the best balance of extended longevity and small size.

Eno™, best service life per cc.

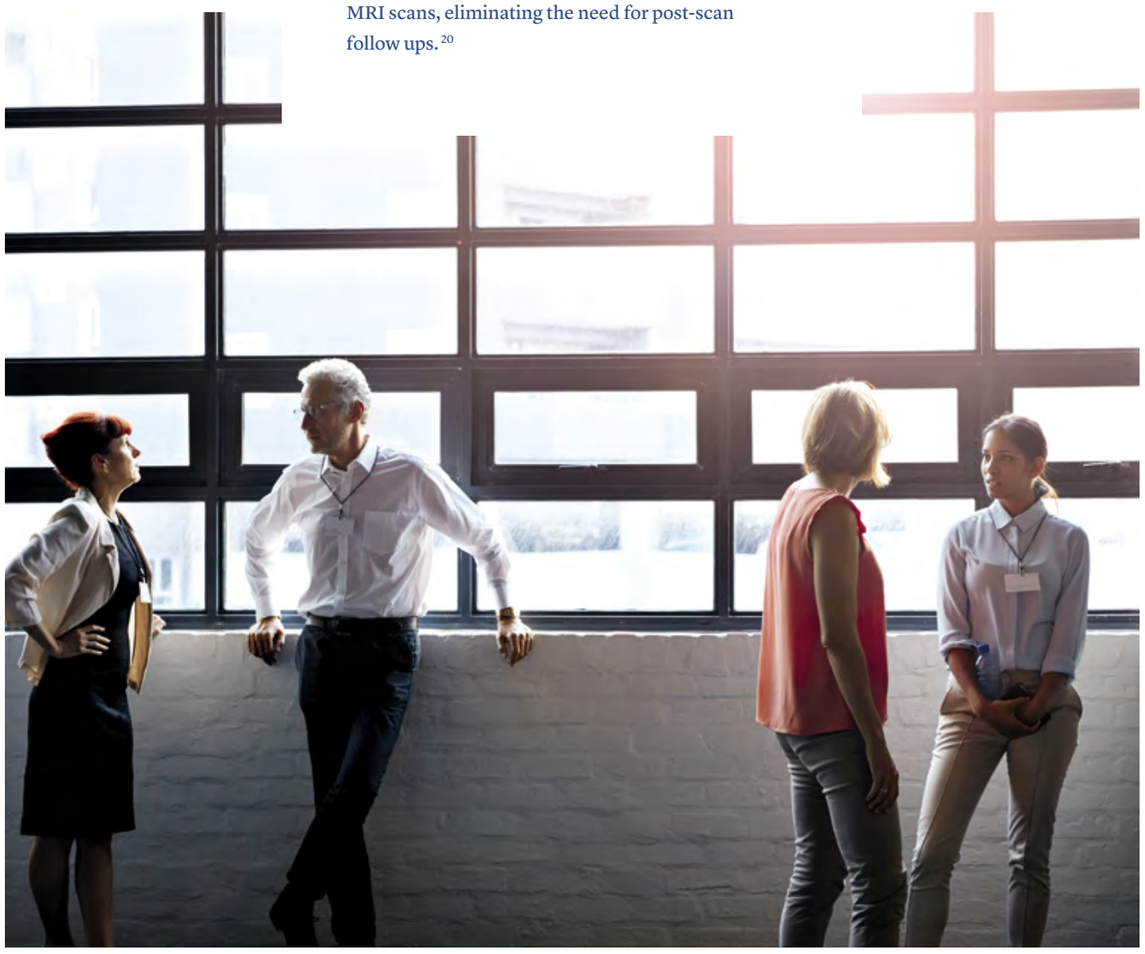


* **CONDITIONS** DDDR MODE 100 % A&V PACING 60min^{-1}, 2.5V, 0.4ms, 500 Ω, SENSOR G ON, EGMs ON
** **CONDITIONS** DDD MODE 100 % A&V PACING 60min^{-1}, 2.5V, 0.4ms, 500 Ω, SENSOR G OFF, EGMs ON

AUTOMRI™

Visit. Scan. Go.

More independence for cardiologists, radiologists and patients with greater flexibility in scheduling MRI scans, eliminating the need for post-scan follow ups.[20]



AUTOMRI™

Cardiologists

- Device automatically switches in and out of MRI mode upon detection of MR field
- 10 days scan window allows greater scheduling flexibility
- Multiple MRI scans possible during the programmed window
- No need to accompany the patient during or after the scan
- No post MRI follow-up is needed

Radiologists

- MR sensor activates MRI mode upon detecting the magnetic field
- Device switches back to its optimal pacing mode automatically
- No intervention needed from the radiologist or cardiologist after the scan
- Patient is ready to leave the hospital without assistance

Patients

- Patient enjoys optimal pacing settings right up to and just after the scan
- Device automatically switches to asynchronous MRI mode only for the duration of the scan
- Protects the patient by keeping their time in asynchronous mode to an absolute minimum[21]
- Ensures patients don’t leave the hospital in sub-optimal settings

AUTOMRI™

Ease the Workflow.

1. Patient visits the cardiologist.

Cardiologist turns AutoMRI ON.

2. There is a 10 day window where the patient can have an MRI scan.

No limitation on the number of scans during these 10 days.
No need to return to the cardiologist for any additional check ups. This allows for flexibility in scheduling MRI scans.

3. Patient enters MRI Scan.

Approaching and detecting the scanner, the device switches into asynchronous MRI mode. Moving away from the scanner, 5 minutes after the patient leaves, the device switches back to the initial settings.

4. Patient can go home.

Without any assistance or intervention. No visit to cardiologist required, patient is free to go home autonomously.

2014
CARDIOSTIM
INNOVATION
AWARDS

AUTOMRI™ comes as standard.

2014 Innovation award for AutoMRI technology.
Longest experience in automatic MRI detection.

✓ AutoMRI is available in all MICROPORT™ CRM MR conditional pacemakers.[20]

Technical specifications

Eno™	SR	DR
MR COMPATIBILITY 1.5 T AND 3 T	✓	✓
AUTOMRI™	✓	✓
[SAFER]™ - AAI ↔ DDD		✓
SLEEP APNEA MONITORING - [SAM]™	✓	✓
[DUAL SENSOR] - MV+G	✓	✓
PHYSIOLOGICAL REST RATE	✓	✓
DPLUS AV HYSTERISIS		✓
ACCELERATION & AV DELAY SHORTENING		✓
AF PREVENTION		✓
AUTOMATIC IMPLANT DETECTION	✓	✓
LEAD POLARITY SWITCH	✓	✓
AUTOTHRESHOLD	V	A & V
AUTOSENSING	A / V	A & V
SMARTCHECK	✓	✓

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Manufactured in Europe
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