



# Medtronic Physio-Control

Life-Pack 10P, 12, 15 and 20 - 20ms Pulse Width

## Maximum Pacing Duration

### Recommended Maximum Pacing Duration for Vermed Electrodes (in Hours)

|                      | Pacing Rate (ppm) |    |    |    |    |    |     |     |     |     |     |     |     |     |    |
|----------------------|-------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                      | 40                | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 |    |
| Pulse Amplitude (mA) | 10                | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24 |
|                      | 20                | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24 |
|                      | 30                | 24 | 24 | 24 | 24 | 24 | 23  | 20  | 16  | 16  | 14  | 12  | 10  | 8   | 8  |
|                      | 40                | 24 | 24 | 24 | 22 | 22 | 18  | 18  | 16  | 14  | 14  | 10  | 10  | 8   | 8  |
|                      | 50                | 24 | 24 | 22 | 20 | 18 | 16  | 16  | 14  | 14  | 10  | 10  | 8   | 8   | 6  |
|                      | 60                | 24 | 22 | 20 | 18 | 16 | 14  | 14  | 11  | 10  | 9   | 8   | 6   | 5   | 5  |
|                      | 70                | 24 | 23 | 20 | 17 | 15 | 14  | 12  | 11  | 9   | 8   | 6   | 5   | 5   | 4  |
|                      | 80                | 22 | 21 | 20 | 17 | 14 | 13  | 12  | 11  | 8   | 7   | 5   | 4   | 4   | 4  |
|                      | 90                | 20 | 20 | 18 | 16 | 14 | 13  | 11  | 9   | 8   | 6   | 4   | 4   | 3   | 3  |
|                      | 100               | 18 | 18 | 17 | 16 | 13 | 12  | 10  | 9   | 7   | 5   | 4   | 4   | 3   | 3  |
|                      | 110               | 18 | 17 | 16 | 14 | 12 | 10  | 9   | 8   | 6   | 4   | 4   | 3   | 3   | 3  |
|                      | 120               | 16 | 16 | 15 | 13 | 11 | 10  | 8   | 8   | 5   | 4   | 3   | 3   | 2   | 2  |
|                      | 130               | 14 | 14 | 13 | 11 | 10 | 9   | 8   | 7   | 5   | 4   | 3   | 2   | 2   | 2  |
|                      | 140               | 12 | 12 | 11 | 10 | 9  | 8   | 7   | 6   | 4   | 4   | 3   | 2   | 2   | 2  |
|                      | 150               | 11 | 10 | 8  | 6  | 6  | 5   | 5   | 4   | 4   | 3   | 2   | 2   | 2   | 2  |
|                      | 160               | 10 | 8  | 6  | 5  | 4  | 3   | 3   | 3   | 2   | 2   | 2   | 2   | 1   | 1  |
|                      | 170               | 8  | 8  | 4  | 3  | 3  | 3   | 2   | 2   | 2   | 2   | 2   | 1   | 1   | 1  |
|                      | 180               | 8  | 7  | 4  | 3  | 3  | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1  |
|                      | 190               | 8  | 6  | 5  | 4  | 3  | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1  |
|                      | 200               | 8  | 6  | 4  | 3  | 3  | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1  |

Not to be reproduced without permission from Vermed



# Zoll

40ms Pulse Width

## Maximum Pacing Duration

### Recommended Maximum Pacing Duration for Vermed Electrodes (in Hours)

|     | Pacing Rate (ppm) |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |
|-----|-------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 30                | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
| 10  | 24                | 24 | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  |
| 20  | 24                | 24 | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  |
| 30  | 24                | 24 | 22 | 20 | 16 | 14 | 12 | 10  | 8   | 8   | 7   | 6   | 6   | 5   | 5   | 4   |
| 40  | 22                | 16 | 14 | 12 | 10 | 8  | 8  | 6   | 6   | 7   | 6   | 5   | 4   | 4   | 4   | 3   |
| 50  | 20                | 15 | 14 | 12 | 10 | 8  | 7  | 6   | 5   | 4   | 4   | 3   | 3   | 3   | 2   | 2   |
| 60  | 16                | 14 | 12 | 10 | 9  | 7  | 6  | 5   | 4   | 4   | 4   | 3   | 3   | 2   | 2   | 2   |
| 70  | 14                | 12 | 10 | 10 | 8  | 6  | 5  | 5   | 4   | 3   | 3   | 3   | 2   | 2   | 2   | 2   |
| 80  | 12                | 10 | 9  | 9  | 8  | 6  | 5  | 4   | 3   | 3   | 3   | 2   | 2   | 2   | 2   | 2   |
| 90  | 10                | 9  | 8  | 8  | 6  | 4  | 4  | 4   | 3   | 3   | 2   | 2   | 2   | 2   | 1   | 1   |
| 100 | 9                 | 8  | 7  | 6  | 5  | 4  | 3  | 3   | 3   | 2   | 2   | 2   | 2   | 2   | 1   | 1   |
| 110 | 8                 | 7  | 6  | 6  | 4  | 3  | 3  | 3   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   |
| 120 | 8                 | 6  | 6  | 5  | 4  | 3  | 2  | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   |
| 130 | 7                 | 5  | 5  | 5  | 3  | 2  | 2  | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |
| 140 | 6                 | 5  | 4  | 4  | 3  | 2  | 2  | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |
| 150 | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 160 | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 170 | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 180 | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 190 | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 200 | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |

Not to be reproduced without permission from Vermed



# Philips Codemaster

20ms Pulse Width

## Maximum Pacing Duration

### Recommended Maximum Pacing Duration for Vermed Electrodes (in Hours)

|                      | Pacing Rate (ppm) |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |
|----------------------|-------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                      | 40                | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |    |
| Pulse Amplitude (mA) | 10                | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24 |
|                      | 20                | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24 |
|                      | 30                | 24 | 24 | 24 | 24 | 24 | 23  | 20  | 16  | 16  | 14  | 12  | 10  | 8   | 8   | 8  |
|                      | 40                | 24 | 24 | 24 | 22 | 22 | 18  | 18  | 16  | 14  | 14  | 10  | 10  | 8   | 8   | 8  |
|                      | 50                | 24 | 24 | 22 | 20 | 18 | 16  | 16  | 12  | 12  | 10  | 10  | 8   | 8   | 6   | 6  |
|                      | 60                | 24 | 22 | 20 | 18 | 16 | 14  | 14  | 11  | 10  | 9   | 8   | 6   | 5   | 5   | 5  |
|                      | 70                | 24 | 23 | 20 | 17 | 15 | 14  | 12  | 11  | 9   | 8   | 6   | 5   | 5   | 4   | 4  |
|                      | 80                | 22 | 21 | 20 | 17 | 14 | 13  | 12  | 11  | 8   | 7   | 5   | 4   | 4   | 4   | 3  |
|                      | 90                | 20 | 20 | 18 | 16 | 14 | 13  | 11  | 9   | 8   | 6   | 4   | 4   | 3   | 3   | 2  |
|                      | 100               | 18 | 18 | 17 | 16 | 13 | 12  | 10  | 9   | 7   | 5   | 4   | 4   | 3   | 3   | 2  |
|                      | 110               | 18 | 17 | 16 | 15 | 12 | 10  | 9   | 8   | 6   | 4   | 4   | 3   | 3   | 3   | 2  |
|                      | 120               | 16 | 16 | 15 | 13 | 11 | 10  | 8   | 8   | 5   | 4   | 3   | 3   | 2   | 2   | 1  |
|                      | 130               | 14 | 14 | 13 | 11 | 10 | 9   | 8   | 7   | 5   | 4   | 3   | 2   | 2   | 2   | 1  |
|                      | 140               | 12 | 12 | 11 | 10 | 9  | 8   | 7   | 6   | 4   | 4   | 3   | 2   | 2   | 2   | 1  |
|                      | 150               | 11 | 10 | 8  | 6  | 6  | 5   | 5   | 4   | 4   | 3   | 2   | 2   | 2   | 2   | 1  |
|                      | 160               | 10 | 8  | 6  | 5  | 4  | 3   | 3   | 3   | 2   | 2   | 2   | 2   | 1   | 1   | 1  |
|                      | 170               | 8  | 8  | 4  | 3  | 3  | 3   | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1  |
|                      | 180               | 8  | 7  | 4  | 3  | 3  | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1  |
|                      | 190               | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -  |
|                      | 200               | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -  |

Not to be reproduced without permission from Vermed



# Philips HeartStart MRx

Monitor/Defibrillator/Pacemaker - 40ms Pulse Width

## Maximum Pacing Duration

### Recommended Maximum Pacing Duration for Vermed Electrodes (in Hours)

|                      | Pacing Rate (ppm) |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |
|----------------------|-------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|                      | 30                | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |    |
| Pulse Amplitude (mA) | 10                | 24 | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24 |
|                      | 20                | 24 | 24 | 24 | 24 | 24 | 24 | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24  | 24 |
|                      | 30                | 24 | 24 | 22 | 20 | 16 | 14 | 12  | 10  | 8   | 8   | 7   | 6   | 6   | 5   | 5   | 4  |
|                      | 40                | 22 | 16 | 14 | 12 | 10 | 8  | 8   | 6   | 6   | 7   | 6   | 5   | 4   | 4   | 4   | 3  |
|                      | 50                | 20 | 15 | 14 | 12 | 10 | 8  | 7   | 6   | 5   | 4   | 4   | 3   | 3   | 3   | 2   | 2  |
|                      | 60                | 16 | 14 | 12 | 10 | 9  | 7  | 6   | 5   | 4   | 4   | 4   | 3   | 3   | 2   | 2   | 2  |
|                      | 70                | 14 | 12 | 10 | 10 | 8  | 6  | 5   | 5   | 4   | 3   | 3   | 3   | 2   | 2   | 2   | 2  |
|                      | 80                | 12 | 10 | 9  | 9  | 8  | 6  | 5   | 4   | 3   | 3   | 3   | 2   | 2   | 2   | 2   | 2  |
|                      | 90                | 10 | 9  | 8  | 8  | 6  | 4  | 4   | 4   | 3   | 3   | 2   | 2   | 2   | 2   | 1   | 1  |
|                      | 100               | 9  | 8  | 7  | 6  | 5  | 4  | 3   | 3   | 3   | 2   | 2   | 2   | 2   | 2   | 1   | 1  |
|                      | 110               | 8  | 7  | 6  | 6  | 4  | 3  | 3   | 3   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1  |
|                      | 120               | 8  | 6  | 6  | 5  | 4  | 3  | 2   | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1  |
|                      | 130               | 7  | 5  | 5  | 5  | 3  | 2  | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1  |
|                      | 140               | 6  | 5  | 4  | 4  | 3  | 2  | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1  |
|                      | 150               | 5  | 4  | 4  | 3  | 3  | 2  | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1  |
|                      | 160               | 4  | 4  | 3  | 3  | 3  | 2  | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1  |
| 170                  | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |    |
| 180                  | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |    |
| 190                  | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |    |
| 200                  | -                 | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   |    |

Not to be reproduced without permission from Vermed