

# Converters

ResMed supplies the following converters for the following products:

| Product                      | Converter  |
|------------------------------|--|
| S8 & S8 II series, VPAP Auto | DC-12 converter (p/n 33942)  |
| VPAP III ST-A                | DC 24/30 converter (p/n 22015)   |
| VPAP series                  | DC-24 converter (p/n 26932) to be used in conjunction with the Battery Adapter Cable (p/n 22006) |
| S9 series                    | DC/DC converter 24V/90W (p/n 36970)  |

**Note:** ResMed no longer distributes converters for the AutoSet CS2 or VPAP Adapt SV.

Why use a converter?

- The converter is more efficient than an inverter.
- The converter provides electrical protection to the flow generator in the event that the adapter leads are connected incorrectly to the battery.
- The converter provides regulation of the battery voltage: a fully charged battery has a terminal voltage of 13.5 volts and will reduce as the battery is discharged.
- The converter will shutdown automatically when the voltage drops below 10.5 volts for a 12 volt battery, or 21 volts for a 24 volt battery. This will protect the battery from damage due to being allowed to fully discharge.
- The converter provides electrical isolation to the flow generator.



# VPAP Auto

| • VPAP Auto                 |                                   |   |                                   |   |
|-----------------------------|-----------------------------------|---|-----------------------------------|---|
|                             | AutoSet pressure $\leq 10$        |   | AutoSet pressure $> 10$           |   |
| PS<br>(cm H <sub>2</sub> O) | Current draw at<br>12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) | Current draw at 12 V<br>DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
| 2                           | 0.89                              | 11  | 1.40                              | 17  |
| 4                           | 0.87                              | 10  | 1.32                              | 16  |
| 6                           | 0.86                              | 10  | 1.23                              | 15  |
| 8                           | 0.89                              | 11  | 1.17                              | 14  |
| 10                          | 0.85                              | 10  | 1.07                              | 13  |
| • VPAP Auto + Humidaire 3i  |                                   |   |                                   |   |
|                             | AutoSet pressure $\leq 10$        |   | AutoSet pressure $> 10$           |   |
| PS<br>(cm H <sub>2</sub> O) | Current draw at<br>12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) | Current draw at 12 V<br>DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
| 2                           | 8.59                              | 103   | 8.85                              | 108   |
| 4                           | 8.59                              | 103   | 8.85                              | 108   |
| 6                           | 8.59                              | 103   | 8.85                              | 108   |
| 8                           | 8.59                              | 103   | 8.85                              | 108   |
| 10                          | 8.59                              | 103   | 8.85                              | 108   |

# ResMed devices powered with converter

## S8 series

**Note:** As treatment pressure varies widely with automatic devices, 95th percentile pressure is used for all AutoSet products.

| Product   | Treatment pressure*<br>(cm H <sub>2</sub> O) | Current draw<br>at 12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
|---|--|-----------------------------------|---|
| <ul style="list-style-type: none"> <li>S8 Lightweight</li> <li>S8 Escape</li> </ul>   | 6  | 0.80                              | 10  |
|   | 8  | 0.90                              | 11  |
|   | 10   | 1.02                              | 12  |
|   | 12   | 1.12                              | 13  |
|   | 16   | 1.37                              | 16  |
|   | 20   | 1.66                              | 20  |
| <ul style="list-style-type: none"> <li>S8 Elite</li> <li>S8 AutoScore</li> <li>S8 AutoSet Vantage</li> <li>S8 AutoSet Spirit</li> <li>S8 AutoSet C</li> <li>S8 Respond</li> </ul> | 6  | 0.90                              | 11  |
|   | 8  | 0.98                              | 12  |
|   | 10   | 1.09                              | 13  |
|   | 12   | 1.21                              | 14  |
|   | 16   | 1.46                              | 18  |
|   | 20   | 1.73                              | 21  |

## S8 II series

**Note:** As treatment pressure varies widely with automatic devices, 95th percentile pressure is used for all AutoSet products.

| Product  | Treatment pressure*<br>(cm H <sub>2</sub> O) | Current draw<br>at 12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
|--|--|-----------------------------------|---|
| <ul style="list-style-type: none"> <li>S8 Elite II</li> <li>S8 AutoScore II</li> <li>S8 AutoSet Spirit II</li> <li>S8 AutoSet</li> <li>S8 Respond</li> </ul> | 6  | 0.57                              | 7   |
|  | 8  | 0.70                              | 8   |
|  | 10   | 0.84                              | 10  |
|  | 12   | 0.96                              | 12  |
|  | 16   | 1.22                              | 15  |
|  | 20   | 1.51                              | 18  |
| <ul style="list-style-type: none"> <li>S8 Escape II (EPR-setting 3)</li> </ul>   | 5  | 0.41                              | 5   |
|  | 10   | 0.61                              | 7   |
|  | 15   | 0.86                              | 10  |
|  | 20   | 1.17                              | 14  |

## VPAP series (VPAP Auto 25, VPAP ST, VPAP S, VPAP IV, VPAP IV ST, S8 Auto 25)

| IPAP<br>(cm H <sub>2</sub> O) | Current draw at 12 V DC<br>(amps) | Battery size for 4 hours use (amp-hours)<br>(includes 50% safety margin) | Battery size for 8 hours use (amp-hours)<br>(includes 50% safety margin) |
|-------------------------------|-----------------------------------|--|--|
| 10                            | 1.0                               | 6  | 12   |
| 15                            | 1.2                               | 7  | 14   |
| 20                            | 1.5                               | 9  | 18   |
| 25                            | 1.8                               | 11   | 22   |

## S9 Series (S9 AutoSet, S9 Elite, S9 Escape, S9 Escape Auto)

| Product  | Treatment pressure*<br>(cm H <sub>2</sub> O) | Current draw<br>at 12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
|--|--|-----------------------------------|---|
| • S9   | 6  | 0.39                              | 5   |
|  | 8  | 0.46                              | 6   |
|  | 10   | 0.55                              | 7   |
|  | 12   | 0.65                              | 8   |
|  | 16   | 0.9                               | 11  |
|  | 20   | 1.0                               | 13  |
| • S9 + H5i (H5i setting 3)                         | 6  | 1.25                              | 15  |
|  | 8  | 1.62                              | 20  |
|  | 10   | 2.03                              | 25  |
|  | 12   | 2.39                              | 29  |
|  | 16   | 3.19                              | 39  |
|  | 20   | 4.03                              | 49  |
| • S9 + H5i (H5i setting 6)                         | 6  | 4.61                              | 56  |
|  | 8  | 4.84                              | 59  |
|  | 10   | 4.99                              | 60  |
|  | 12   | 5.17                              | 63  |
|  | 16   | 5.58                              | 67  |
|  | 20   | 6.04                              | 73  |
| • S9 + H5i + Climate control<br>(CC setting 30° C) | 6  | 4.27                              | 52  |
|  | 8  | 5.08                              | 61  |
|  | 10   | 5.58                              | 67  |
|  | 12   | 5.77                              | 70  |
|  | 16   | 6.15                              | 74  |
|  | 20   | 6.59                              | 79  |

## S9 VPAP (S9 VPAP S, S9 VPAP ST)

| Product   | IPAP<br>(cm H <sub>2</sub> O) | Current draw<br>at 12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
|---|-------------------------------|-----------------------------------|---|
| • S9 VPAP   | 10                            | 0.52                              | 7   |
|   | 15                            | 0.80                              | 10  |
|   | 20                            | 1.17                              | 15  |
|   | 25                            | 1.57                              | 19  |
| • S9 VPAP + H5i<br>(H5i setting 3)                      | 10                            | 1.41                              | 17  |
|   | 15                            | 1.90                              | 23  |
|   | 20                            | 3.07                              | 37  |
|   | 25                            | 3.44                              | 42  |
| • S9 VPAP + H5i<br>(H5i setting 6)                      | 10                            | 4.87                              | 59  |
|   | 15                            | 5.10                              | 62  |
|   | 20                            | 5.95                              | 72  |
|   | 25                            | 6.35                              | 77  |
| • S9 VPAP + H5i + Climate<br>control (CC setting 30° C) | 10                            | 4.66                              | 56  |
|   | 15                            | 5.69                              | 69  |
|   | 20                            | 6.1                               | 74  |
|   | 25                            | 6.41                              | 77  |

**Note:** Where the H5i is being used figures will vary dependant upon relative humidity.

## S9 AutoSet CS

| Product  | EPAP<br>(cm H <sub>2</sub> O) | Current draw<br>at 12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
|--|-------------------------------|-----------------------------------|---|
| • S9 AutoSet CS  | 5                             | 0.54                              | 7   |
|  | 10                            | 0.75                              | 9   |
|  | 15                            | 1.00                              | 12  |
| • S9 AutoSet CS + H5i<br>(H5i setting 3)                         | 5                             | 1.27                              | 16  |
|  | 10                            | 2.01                              | 25  |
|  | 15                            | 2.26                              | 28  |
| • S9 AutoSet CS + H5i<br>(H5i setting 6)                         | 5                             | 3.89                              | 47  |
|  | 10                            | 5.10                              | 62  |
|  | 15                            | 5.42                              | 65  |
| • S9 AutoSet CS + H5i +<br>Climate control (CC setting<br>30° C) | 5                             | 3.05                              | 37  |
|  | 10                            | 4.29                              | 52  |
|  | 15                            | 5.34                              | 65  |

## S9 VPAP Auto

| Product   | Max IPAP<br>(cm H <sub>2</sub> O) | Current draw<br>at 12 V DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
|---|-----------------------------------|-----------------------------------|---|
| • S9 VPAP Auto  | 15                                | 0.54                              | 7   |
|   | 20                                | 0.75                              | 9   |
|   | 25                                | 1.00                              | 12  |
| • S9 VPAP Auto + H5i<br>(H5i setting 3)                         | 15                                | 1.27                              | 16  |
|   | 20                                | 2.01                              | 25  |
|   | 25                                | 2.26                              | 28  |
| • S9 VPAP Auto + H5i<br>(H5i setting 6)                         | 15                                | 3.89                              | 47  |
|   | 20                                | 5.10                              | 62  |
|   | 25                                | 5.42                              | 65  |
| • S9 VPAP Auto + H5i +<br>Climate control (CC setting<br>30° C) | 15                                | 3.05                              | 37  |
|   | 20                                | 4.29                              | 52  |
|   | 25                                | 5.34                              | 65  |

## VPAP Malibu

| AutoSet pressure<br>(cm H <sub>2</sub> O) | Current draw at 12 V<br>DC (amps) | Battery size for 8 hours use (amp-hours)<br>(includes 50% safety margin) |
|---|-----------------------------------|--|
| 10  | 1.09                              | 13   |
| 20  | 1.74                              | 21   |

## VPAP Auto

|                             | AutoSet pressure ≤ 10             |   | AutoSet pressure > 10             |   |
|-----------------------------|-----------------------------------|---|-----------------------------------|---|
| PS<br>(cm H <sub>2</sub> O) | Current draw at 12 V<br>DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) | Current draw at 12 V<br>DC (amps) | Battery size for 8 hours use<br>(amp-hours)<br>(includes 50% safety margin) |
| 2                           | 0.67                              | 8   | 1.15                              | 14  |
| 4                           | 0.69                              | 8   | 1.10                              | 13  |
| 6                           | 0.69                              | 8   | 1.03                              | 12  |
| 8                           | 0.67                              | 8   | 0.95                              | 11  |
| 10                          | 0.63                              | 8   | 0.90                              | 11  |