



**Ypso**Pump®



# User Guide

## Insulin Pump

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Either swipe up/down or tap upper/lower value



Tap on action field or icon



Reference to the element described in the text



Note or additional information



Warning and precaution



Read the User Guide



# 1 Introduction

## Warnings

- ⚠ Not following the instructions in the User Guide of your YpsoPump® or not following warnings indicated in this User Guide can lead to hypoglycemia or hyperglycemia (read warning in the box below).
- ⚠ The YpsoPump® insulin pump is only available on prescription. Never use the YpsoPump® without prior training from your doctor or diabetes advisor. Using the YpsoPump® without professional familiarization training can lead to incorrect dosage of insulin. As is the case for any user of an insulin pump, ensuring constant access to an alternative means of injecting insulin (e.g. in case of failure of the insulin pump system) is your own responsibility. For further advice, please consult your doctor or diabetes advisor.
- ⚠ Only rapid-acting insulin at a concentration of 100 U/ml (NovoRapid®, Humalog®, Apidra®) may be used with the YpsoPump® system. Using different insulin can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box below). If you use different insulin, change the cartridge as well as the primed infusion set and continue therapy with the correct type of insulin.



**If you suspect you may have hypoglycemia or hyperglycemia, check your blood glucose more frequently for the next few hours, as recommended by your doctor or diabetes advisor, and adapt the insulin delivery settings to the changed conditions. If you are uncertain, contact your doctor or diabetes advisor immediately. Check your blood glucose as often as your doctor or diabetes advisor recommends. If you do not check your blood glucose regularly, blood glucose fluctuations will not be detected and you will not be able to adapt the insulin dosage of the pump (e.g. bolus amount).**

## 1.1 Note about the User Guide

This User Guide contains all the information required for conducting insulin pump therapy with the YpsoPump® safely and successfully. Make sure you read the entire User Guide carefully.

Should any problems or questions about functions or control procedures arise during insulin pump therapy, refer to the User Guide first. Should you still experience problems or if your questions have not been answered after consulting the User Guide, do not hesitate to call our Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

If the male or female form is used in order to improve readability, both genders are referred to.

## 1.2 Warranty provisions

### Warranty

Ypsomed AG gives you a warranty on your YpsoPump® covering manufacturing and material defects for a period of 5 years from the date of purchase.

The warranty is restricted to free repair or replacement of possibly defective devices, at Ypsomed's own discretion. If the YpsoPump® has been repaired or replaced, the term of the warranty is not extended.

This warranty only applies if the YpsoPump® has been used as intended. This warranty does not apply to defects resulting from improper or careless operation, handling or cleaning, operation contrary to this User Guide or if the YpsoPump® is operated with accessories or supplies other than those recommended by Ypsomed.



**The instructions for use in this User Guide are only valid for the following YpsoPump® article:  
REF 700013408.**

**You find the reference number of your YpsoPump® on your device and on the label of your Starter Kit.**

The warranty does not apply if the YpsoPump®:

- has been altered or modified by anyone other than Ypsomed,
- has been serviced or repaired by anyone other than Ypsomed or
- has been damaged by natural wear, inappropriate use or for other reasons not linked to a manufacturing or material defect.

Warranty rights become void if the insulin pump is damaged by dropping, impact, application of force, contact with fluids listed in chapter 9.1, page 173, water damage due to dropping of the insulin pump, see chapter 9.2, page 174, improper cleaning or in other cases of exposure and wear which arise from usage that is not in accordance with this User Guide.

This warranty only applies to the first user and cannot be transferred to another person or entity neither by sale, hire nor any other transfer of the YpsoPump®.

Insofar as it is legally permissible, this warranty and the legal remedies described are exclusive and they replace all other oral, written, legal and explicitly or implicitly agreed guarantees and warranties, legal remedies and conditions, especially including the warranty of merchantability and usability for a certain purpose.

#### **Procedure in the event of a warranty claim**

Any defect in your YpsoPump® must be reported to Ypsomed, or a service point authorized by it, in writing or on the telephone within the term of warranty.

The claim must contain the date of purchase and the serial number of your YpsoPump® as well as a description of the defect about which the claim is being filed.

The YpsoPump® may only be returned to Ypsomed or a service point authorized by Ypsomed if prior consent has been given by Ypsomed and if the packaging is appropriate. If the complaint is justified, Ypsomed will pay any freight charges for returning the YpsoPump® under this warranty.

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Brunnmattstrasse 6  
CH-3401 Burgdorf  
info@ypsomed.com

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1 Holiday Avenue, Suite 647  
Pointe-Claire  
CA-QC H9R 5N3

Toll free: 1-833-695-5959  
e-mail: info@ypsomed.ca

## 1.3 Indication

The YpsoPump® is intended for subcutaneous insulin delivery in diabetes mellitus therapy. Only rapid-acting insulin at a concentration of 100 U/ml (NovoRapid®, Humalog®, Apidra®) may be used with the YpsoPump® system. The YpsoPump® system is designed for uninterrupted use over the entire service lifetime. The YpsoPump® may be used at the discretion of the supervising health care professional after appropriate and successful training by a qualified person (physician or other qualified personnel). The YpsoPump® may, in agreement with the medical specialist, be used for insulin pump therapy in patients from the age of 6 years.

### Contraindication

The YpsoPump® system is not suitable for persons:

- Who are unable to perform at least four blood glucose tests a day.
- Who are unable to maintain regular contact with their medical supervisor.
- Who do not have adequate eyesight or hearing to be able to operate the YpsoPump® system in accordance with the User Guide.

### Safety instructions

Read all the instructions in this User Guide attentively. Only use the YpsoPump® system after having received familiarization training from your healthcare professional. If you are not able to use the YpsoPump® in accordance with this User Guide, you may jeopardize your health and safety. In case of doubt consult your doctor, diabetes advisor or Customer Service. Should any technical problems or questions arise, refer to the User Guide first. Should you still experience problems or if your questions have not been answered after consulting the User Guide, do not hesitate to call our Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

## 1.4 Disposal

When disposing of all materials, always comply with the environmental protection regulations applicable in the particular country. Always dispose of needles and sharp or pointed objects, such as the cannula base, the tubing with adapter and the introducer needle of your YpsoPump® Orbit infusion set, in a safety bin.

## 2 Operation

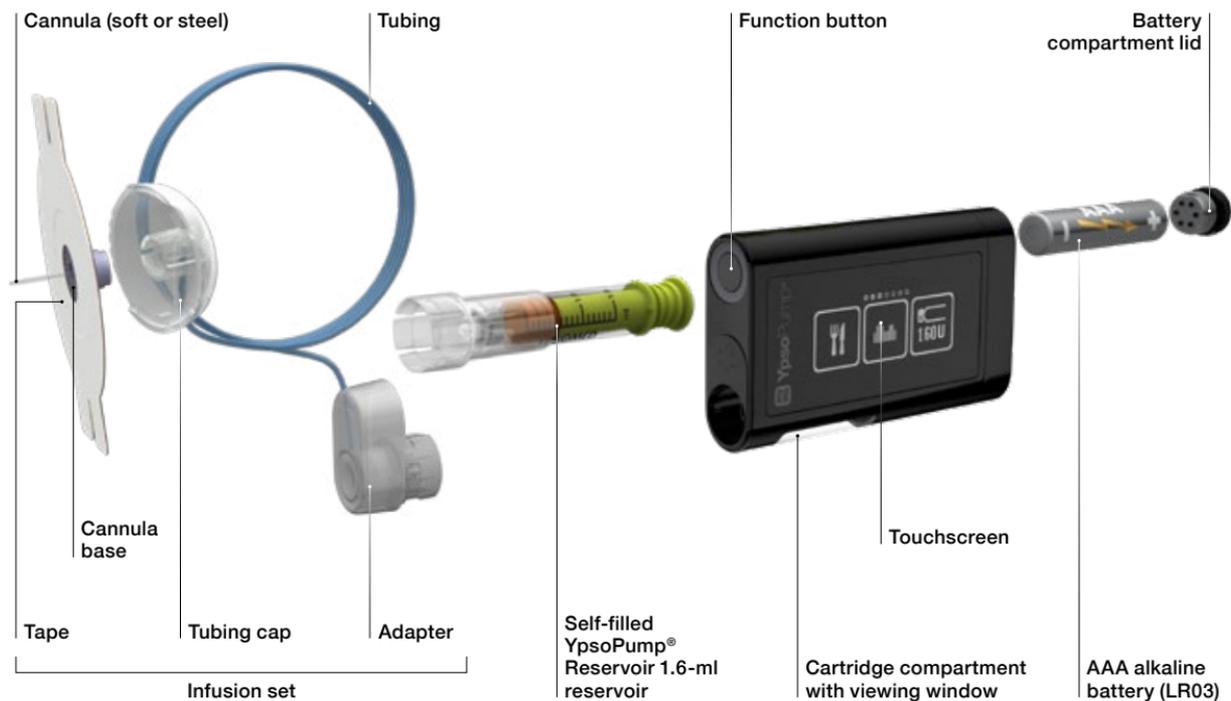
The YpsoPump® system is designed to be as user-friendly as possible. All operating procedures are simple and straightforward. Frequently used functions such as bolus, infusion set change or cartridge change can be performed quickly and easily.

### Warnings

- ⚠ Confusion of icons or using the wrong icon by mistake can lead to incorrect dosage of insulin. If you have confused an icon by mistake or used the wrong icon by mistake, refer to the correct function in this User Guide and check the settings specified by your doctor or diabetes advisor. If you have accidentally activated the wrong function or accidentally changed an insulin pump setting, undo it as described in this User Guide. If you are uncertain, contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10. If the accidental confusion or the accidental mix-up has caused your insulin delivery to stop or change, check your blood glucose more frequently for the next few hours, as recommended by your doctor or diabetes advisor, and adapt the insulin delivery to the changed conditions. If you are uncertain, contact your doctor or diabetes advisor immediately.
- ⚠ Never expose the YpsoPump® to radiation or heat (e.g. radiators, open fires, direct sunlight). This also applies to the insulin you are using. For information about the correct insulin storage conditions and operating conditions please refer to the instructions for use of the insulin you are using.
- ⚠ Never drop the YpsoPump®, never tap the insulin pump on a solid surface (table, kitchen worktop, washbasin, etc.) and never use sharp objects (knife, screwdriver, steel wool, etc.), chemicals, solvents or strong detergents to clean the pump. If the YpsoPump® is dropped, tapped or cleaned with sharp objects, microcracks and/or visible damage may influence the functionality and watertightness of the insulin pump. If the insulin pump is damaged, the correct delivery of insulin will not be guaranteed; this can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). Make sure you carry the YpsoPump® in your trouser pocket or with a carrying system offered by Ypsomed to protect your insulin pump.

- ⚠ Never use objects to operate the YpsoPump®. They could damage the screen or the function button and compromise the operability of the YpsoPump®. If the insulin pump is damaged, correct delivery of insulin cannot be guaranteed; this can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). Ensure that your delivery of insulin is as recommended by your doctor or diabetes advisor and consult Customer Service. You find the contact details on the back of this User Guide as well as on page 10.
- ⚠ Only use AAA alkaline batteries (LR03) with your YpsoPump®. Make sure the battery is not damaged. A damaged battery could result in a short circuit. If a different type of battery (e.g. a lithium battery or an NiMH rechargeable battery) or a damaged battery is inserted, there is no guarantee that the insulin pump will be put into operation or operate properly; the advance warning time up to the “Battery empty” alarm (page 163) cannot be maintained when a battery is discharged. This can lead to failure of the preset insulin delivery, which can cause hyperglycemia (read warning in the box on page 7). Make sure to always carry a replacement battery with you.
- ⚠ Always monitor the self-test attentively and carefully. If you are uncertain whether the self-test has been performed correctly, repeat the self-test. If errors occur during the self-test (incomplete display, no vibration signal or audible signal), you must not use the YpsoPump® as potential warnings and alarms on the insulin pump can no longer be displayed and indicated properly. In such a case, contact Customer Service immediately. You find the contact details on the back of this User Guide as well as on page 10.
- ⚠ Take special care when setting the time of day. If a wrong time of day is set, the timing of the basal rate profile could be shifted. Only make changes to your settings after consulting your doctor or diabetes advisor. Incorrect programming of the insulin pump can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ You must replace the battery compartment lid with a new one every three months. Otherwise the seal between the battery compartment lid and the battery compartment may no longer be intact.
- ⚠ Choking hazard: keep the battery compartment lids out of reach of children.

## 2.1 System overview



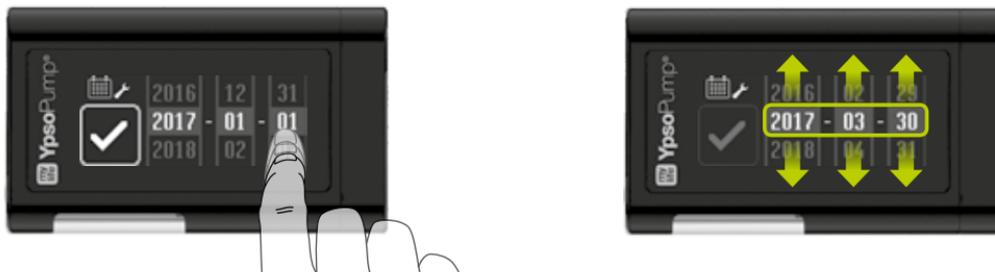
## 2.2 Navigation

### Touchscreen

The YpsoPump® has a touchscreen (referred to below as the screen). You control the screen by using your finger to tap icons and values or swipe through menus and values. The screen of the YpsoPump® may only be controlled with one finger. Do not use any objects to operate the screen.



Using your finger, swipe up or down through the values displayed. In this way you can increase or reduce a value. You can also tap the upper or lower value directly in order to increase or reduce it by one unit. The value selected is always displayed at the center of the visible values and it has a gray background. Do not use the device if it shows visible signs of damage. If the device no longer responds to touch, stop using it. In such a case, contact Customer Service without delay.



### Function button

The YpsoPump® has a function button. It is located next to the opening of the cartridge compartment at the side.

#### The function button has two different functionalities:

- Short press (for up to 0.8 seconds)
- Long press (for at least 2 seconds until the YpsoPump® vibrates)

#### With the function button you can:

- Switch the screen on and off
- Program a blind bolus
- Return to the status screen



Function button

## Icons



The controls on the screen are called icons. Tap an icon with your finger to select it. The brightness of icons is inverted when you touch them with your finger.

## Active and inactive icons



Active icons are bright. That means the function is available and can be selected with your finger.



Inactive icons are displayed in a darker gray. This means the function is not available and cannot be selected with your finger.

## Confirmation and cancelation



To confirm a value or select a function tap .



To cancel a procedure or function, tap . Additionally, bolus cancelation always has to be confirmed by tapping .

## Back function



If you have selected a function or value by mistake or made a wrong setting, you can go back at any time by swiping to the right once until  or  appears. If  appears, you go one step back. You do not quit the function and no set values are lost. If  appears, you move up one menu level.

## 2.3 User interface

### Unlock screen



**1/6:** The status screen of the YpsoPump® is switched on and off by pressing the function button (short button press).



**2/6:** The YpsoPump® has a screen lock. It is visualized by a padlock icon at the top right of the screen, next to the battery charge indicator.



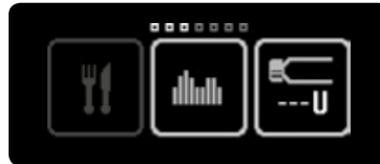
**3/6:** Swipe to the left to unlock the status screen and the main menu. Three icons appear numbered 1, 2 and 3 (unlock screen).



If the YpsoPump® is not operated on the status screen, the screen switches off after 20 seconds and the screen lock is activated. If the YpsoPump® is not operated in the main menu or in a submenu, the screen switches off after two minutes and the screen lock is activated. Any changes that have not been saved, are lost.



**4/6:** Tap the currently active number successively to unlock the status screen. If the three numbers on the unlock screen are not entered in the correct sequence within 10 seconds, you return to the locked status screen. Swipe to the right to return to the locked status screen.



**5/6:** When the YpsoPump® has been unlocked successfully, you are in the main menu. Swipe to the left to access all available menu items.



**6/6:** Swipe to the right to access the unlocked status screen (no padlock icon).

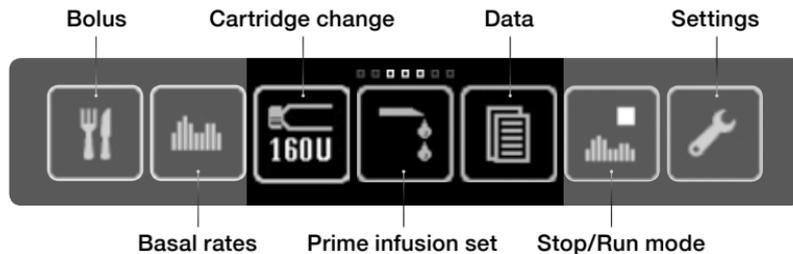


Make sure you switch off the screen before storing the YpsoPump® in your trouser pocket or in a carrying system in order to avoid unintentional operation of the pump.

### Overview of the main menu

On the screen you will see three menu icons at a time. To see the other menu icons, swipe to the left across the screen with your finger.

The navigation bar above the icons shows you the number of menu icons available. The small squares highlighted in white indicate where you currently are in the main menu. When operating the YpsoPump® always make sure you use the various functions properly.



## 2.4 Run and stop modes

### Run mode

The YpsoPump® has two different operating modes, “Run” and “Stop”. The “Stop mode” and “Run mode” icons show the current operating status of the insulin pump in each case. Insulin delivery (e.g. basal rate) is only possible in run mode.



**1/3:** Open the main menu, swipe to the left and tap the “Stop mode/switch to run mode” icon.



**2/3:** Confirm by tapping . The YpsoPump® vibrates briefly.



**3/3:** The status screen appears.  
Basal rate delivery starts according  
to the programmed profile.

## Stop mode

To switch the YpsoPump® from run mode to stop mode, open the main menu. Insulin delivery is not possible in stop mode.



**1/3:** Open the main menu, swipe to the left and tap the “Run mode/switch to stop mode” icon.



**2/3:** Confirm by tapping . The YpsoPump® vibrates briefly.



**3/3:** The status screen appears. Insulin deliveries are stopped immediately. This is indicated on the screen.



The screen of the YpsoPump® shows a stop warning if the insulin pump has been in stop mode for more than one hour. The stop warning can be triggered prematurely, directly after the insulin pump has been set into stop mode, by giving the function button a long press and then confirming the warning.

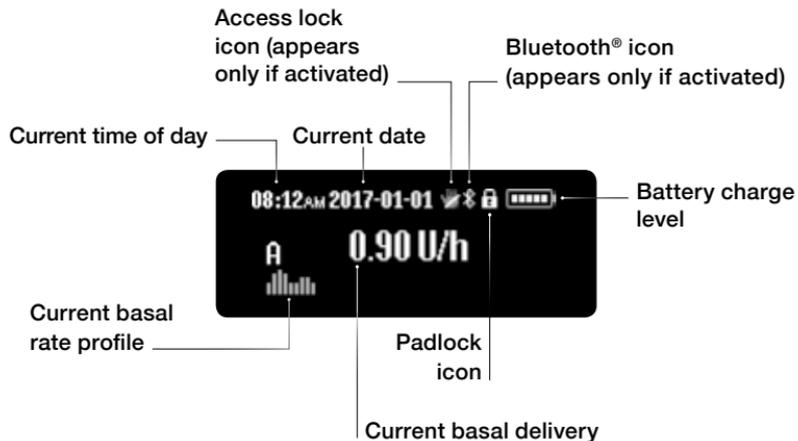


### Status screen in run mode

The status screen is the main display of information and it indicates the current operating status of the YpsoPump®. You can access the status screen at any time by giving the function button one short press. If you do not use the status screen of the YpsoPump®, it switches off automatically after 20 seconds. The YpsoPump® still remains active and in run mode, it delivers insulin continuously according to the programmed settings.

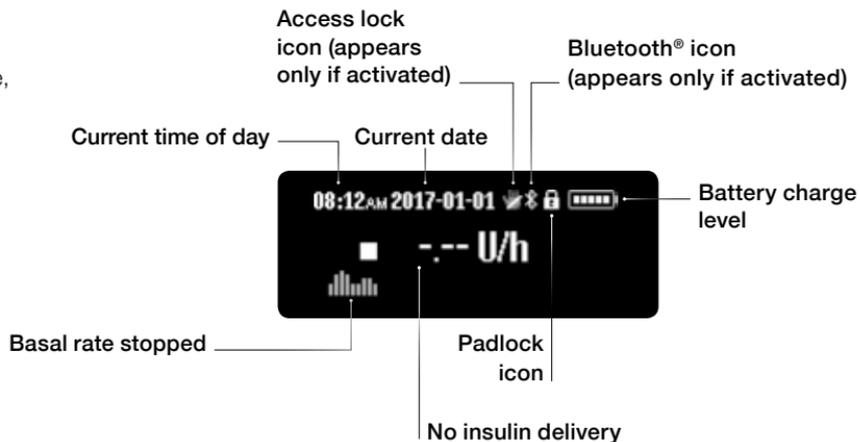
If the insulin pump is in run mode, the status screen indicates the current basal rate profile and the current insulin delivery.

If you are in the main menu or in a submenu and you do not operate the insulin pump for two minutes, the screen switches off automatically.



### Status screen in stop mode

If the insulin pump is in stop mode, all insulin delivery is canceled.



The battery charge level is indicated by rectangles in the battery icon on the status screen of the pump. The number of rectangles is proportional to the battery charge.



Battery charge level low



Battery fully charged

## 2.5 Putting into operation

### Inserting a battery



**1/11:** Insert a new AAA alkaline battery (LR03). Make sure the negative pole of the battery is inserted first. On the back of the insulin pump you will see a picture showing how to insert the battery.



**2/11:** Lock the battery compartment by turning the groove of the battery compartment lid clockwise until it is completely closed using the edge of a coin.



You must replace the battery compartment lid with a new one every three months. Otherwise the seal between the battery compartment lid and the battery compartment may no longer be intact.

## Self-test

The self-test is used to check the operability of the YpsoPump® and to give the user visual, tactile and audible feedback. A self-test is performed when putting the insulin pump into operation for the first time, after having started up the insulin pump from storage status and after the threaded rod has been returned.



**3/11:** As soon as the battery has been inserted, the welcome screen appears and remains until the insulin pump starts the self-test.



**4/11:** In addition to the YpsoPump® logo, the serial number of the insulin pump and the software version are displayed at the top left. Confirm the start of the self-test by tapping . The YpsoPump® now performs a self-test.



**5/11:** Three test patterns appear on the screen one after the other. The  $3 \times 3$  test rectangles must be displayed in full with uniform brightness.



**6/11:** Then the YpsoPump® emits two vibration signals (tactile signals).



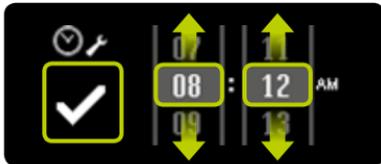
**7/11:** The tactile signals are followed by two audible signals.



**8/11:** The self-test is completed. You can repeat the self-test by swiping to the right. Confirm the successful completion of the self-test by tapping .

If the self-test is not confirmed within 5 minutes after having started up the insulin pump from storage status or after the threaded rod has been returned, the insulin pump indicates this with tactile and audible warnings. If the screen is now switched on using the function button, the start self-test screen appears again (Fig. 4/11). Complete the self-test and confirm.

## Setting the time of day



**9/11:** The screen for setting the time of day appears. Set the current time of day (hours, minutes) by selecting the desired value. Confirm the values set by tapping .

## Setting the date



**10/11:** After setting the time of day, set the current date (year, month, day). Confirm your setting by tapping .



**11/11:** The status screen appears. The insulin pump is in stop mode.

To complete the putting into operation of your insulin pump, please program both basal rate profiles following the steps on page 38, insert a cartridge following the steps on page 95, prime the infusion set following the steps on page 99, attach the infusion set to your body following the steps on page 103, prime the cannula following the steps on page 110 and switch the insulin pump into run mode following the steps on page 25.



You can adjust the time of day and the date at any time in the settings menu. If you select an impossible date (e.g. 2017-02-30), the confirmation icon will be inactive (gray) and you cannot confirm the date.



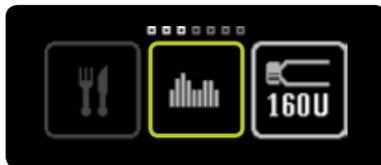
## 3 Basal rate

### Warnings

- ⚠ Use your own therapy settings. The values displayed on the following pages are only examples. Always make the first setting or changes to the basal rate in accordance with the recommendations from your doctor or diabetes advisor and never on your own. Make sure you are not distracted when setting your basal rate – program an entire basal rate profile in a single step. Enter the hourly values carefully and make sure the setting matches your therapy recommendations before each entry.
- ⚠ Only switch from the present basal rate profile to a new basal rate profile and only make changes to the basal rate profile in accordance with the recommendations from your doctor or diabetes advisor. A change in basal rate profile that has not been adapted to a particular situation can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ Always program both basal rate profiles (A and B) in accordance with the recommendations from your doctor or diabetes advisor. If only one basal rate profile is needed, the second one has to be programmed in the same way as the first one. By doing so, the basal rate will continue without any interruption should you unintentionally switch the basal rate profile. Without programming a profile, your basal rate value is set to 0 and your insulin pump will not deliver any basal insulin. This can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ Always set the temporary basal rate function carefully. If the temporary basal rate function is not set properly, the insulin dosage of the insulin pump is not matched to the therapy recommendations, which can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).

### 3.1 Programming basal rate profile A

The basal rate is a basic amount of insulin that is administered continuously in order to keep the blood glucose level within the target range. You have the option of programming two different basal rate profiles (A and B). If only one basal rate profile is needed, profile B has to be programmed in the same way as basal rate profile A.



**1/8:** Open the main menu and tap the “Basal rates” icon.



**2/8:** Tap the “Basal rate profile A” icon.



The following values are displayed on the screen of your YpsoPump® and mentioned in this User Guide using the following abbreviations:

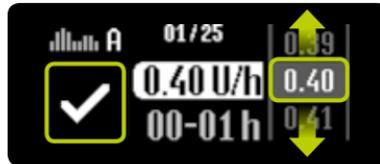
U = insulin units

h = hours

d = day



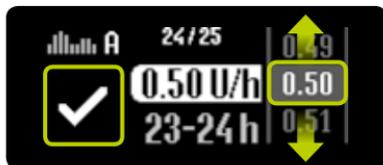
**3/8:** The screen to set the basal rate for the first hour appears, starting at midnight (00–01 h). When putting into operation for the first time (when programming a basal rate profile for the first time), an hourly value, which is set and confirmed, is applied to the next hour as a starting value.



**4/8:** Select the value specified for you by your doctor, between 0.00 U/h and 40.0 U/h, and confirm by tapping . After each confirmation of an hourly value, you automatically move to the next hour. The minimum programmable basal rate greater than 0.00 U/h is 0.05 U/h. The basal rate values between 0.05 U/h and 1.00 U/h can be set in increments of 0.01 U/h. The basal rate values between 1.00 U/h and 2.00 U/h can be set in increments of 0.02 U/h. The basal rate values between 2.00 U/h and 15.0 U/h can be set in increments of 0.1 U/h. The basal rate values between 15.0 U/h and 40.0 U/h can be set in increments of 0.5 U/h.



**5/8:** By swiping to the right you can step back one hour at any time and adjust your previous entry.



**6/8:** Repeat step 4/8 for each individual hour segment until you have entered all 24 basal rate values.



**7/8:** When all values have been entered, the Ypsopump® shows you the basal rate daily dose on a chart and as a value. The basal rate values can be changed by swiping to the right until you reach the segment you want to correct. Confirm by tapping . The Ypsopump® vibrates briefly. The values are saved and one event per basal rate value is written to the therapy data.



**8/8:** The status screen appears. The Ypsopump® is in stop mode. To start insulin delivery switch the insulin pump into run mode. The difference between run mode and stop mode is explained on page 25.



The daily total dose of the programmed basal rate profile is displayed in the basal rate submenu on the corresponding basal rate icon.

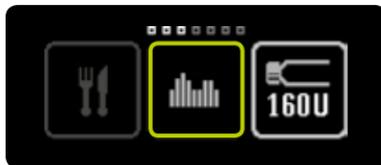


In the settings menu you have the option to set a basal rate limit between 40.0 U/h and 0.05 U/h. Using this function, you can set an hourly basal rate up to the set basal rate limit (and not higher) when programming a basal rate profile (see chapter 3.6, page 55).



## 3.2 Programming basal rate profile B

In addition to basal rate profile A, you have the option of programming a different basal rate profile B. If only one basal rate profile is needed, profile B has to be programmed in the same way as basal rate profile A. You can switch between basal rate profiles A and B at any time.



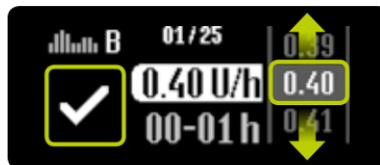
**1/8:** Open the main menu and tap the “Basal rates” icon.



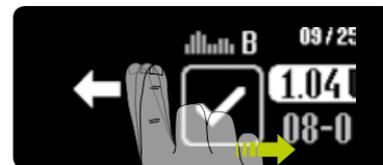
**2/8:** Tap the “Basal rate profile B” icon.



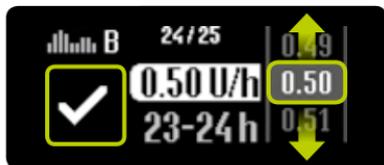
**3/8:** The screen to set the basal rate for the first hour appears, starting at midnight (00–01 h). When putting into operation for the first time (when programming a basal rate profile for the first time), an hourly value, which is set and confirmed, is applied to the next hour as a starting value.



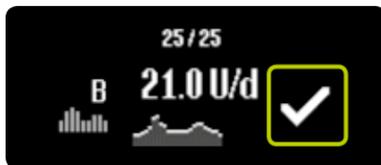
**4/8:** Select the value specified for you by your doctor, between 0.00 U/h and 40.0 U/h, and confirm by tapping . After each confirmation of an hourly value, you automatically move to the next hour. The minimum programmable basal rate greater than 0.00 U/h is 0.05 U/h. The basal rate values between 0.05 U/h and 1.00 U/h can be set in increments of 0.01 U/h. The basal rate values between 1.00 U/h and 2.00 U/h can be set in increments of 0.02 U/h. The basal rate values between 2.00 U/h and 15.0 U/h can be set in increments of 0.1 U/h. The basal rate values between 15.0 U/h and 40.0 U/h can be set in increments of 0.5 U/h.



**5/8:** By swiping to the right you can step back one hour at any time and adjust your previous entry.



**6/8:** Repeat step 4/8 for each individual hour segment until you have entered all 24 basal rate values.



**7/8:** When all values have been entered, the YpsoPump® shows you the basal rate daily dose on a chart and as a value. The basal rate values can be changed by swiping to the right until you reach the segment you want to correct. Confirm by tapping . The YpsoPump® vibrates briefly. The values are saved and one event per basal rate value is written to the therapy data.



**8/8:** The status screen appears. The YpsoPump® is in stop mode. To start insulin delivery switch the insulin pump into run mode. The difference between run and stop mode is explained on page 25.



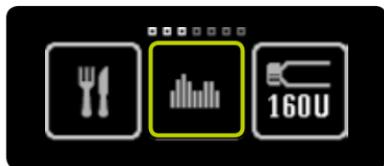
The daily total dose of the programmed basal rate profile is displayed in the basal rate submenu on the corresponding basal rate icon.



In the settings menu you have the option to set a basal rate limit between 40.0 U/h and 0.05 U/h. Using this function, you can set an hourly basal rate up to the set basal rate limit (and not higher) when programming a basal rate profile (see chapter 3.6, page 55).



### 3.3 Switching basal rate profile



**1/4:** Open the main menu and tap the “Basal rates” icon.



**2/4:** If basal rate profile A is active, tap the “Switch to basal rate profile B” icon.



**3/4:** If basal rate profile B is active, tap the “Switch to basal rate profile A” icon.



Always program both basal rate profiles (A and B) in accordance with the recommendations from your doctor or diabetes advisor. If only one basal rate profile is needed, the second one has to be programmed in the same way as the first one. By doing so, the basal rate will continue without any interruption should you unintentionally switch the basal rate profile. Without programming a profile, your basal rate value is set to 0 and your insulin pump will not deliver any basal insulin.

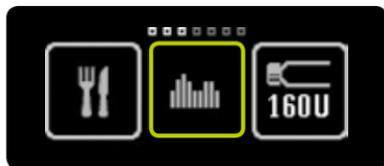


**4/4:** When you have made your selection, the YpsoPump® indicates the relevant basal rate profile (A or B) with the basal rate daily dose. Confirm by tapping . The YpsoPump® vibrates briefly.



Switching basal rate profiles changes basal insulin delivery. Make sure such a change complies with your therapy recommendation. If the temporary basal rate function is activated, the switch basal rate profiles function is not available (the relevant icon is inactive).

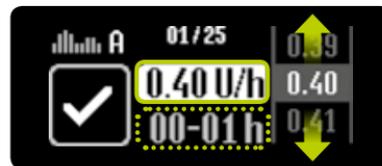
### 3.4 Changing a basal rate profile



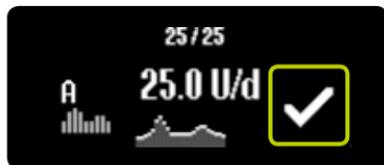
**1/4:** Open the main menu and tap the “Basal rates” icon. The screen displays the basal rate submenu. If the “Temporary basal rate function” is activated, the basal rate profiles A and B functions are not available.



**2/4:** Tap the basal rate profile icon you want to change.



**3/4:** The screen to set the basal rate for the first hour, starting after midnight (00–01 h), is displayed – with the value you set last. You can confirm that value, or select a new value between 0.00 U/h and 40.0 U/h and also confirm by tapping . Now repeat step 3/4 for each individual hour segment for all 24 basal rate values.



**4/4:** Confirm by tapping .

The YpsoPump® vibrates briefly. The YpsoPump® saves the values, writes an event to the therapy data for each changed value and indicates the basal rate daily dose.



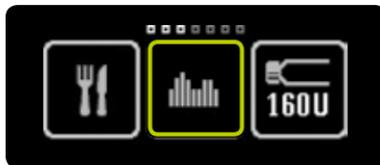
In the settings menu you have the option to set a basal rate limit between 40.0 U/h and 0.05 U/h. Using this function, you can set an hourly basal rate up to the set basal rate limit (and not higher) when programming a basal rate profile (see chapter 3.6, page 55).



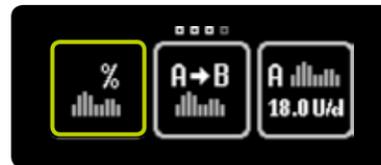
## 3.5 Temporary basal rate function

### Activating the temporary basal rate function

The temporary basal rate function allows you to reduce or increase the basal rate for a limited period of time. When the temporary basal rate set has finished, the programmed basal rate profile (A or B) continues. To use the temporary basal rate function the YpsoPump® must be in run mode.



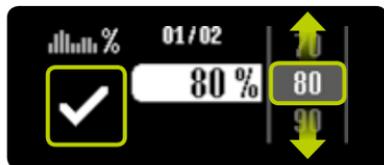
**1/7** Open the main menu and tap the “Basal rates” icon.



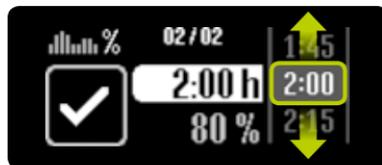
**2/7:** Tap the “Temporary basal rate function” icon.



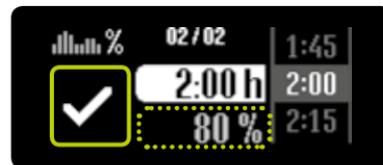
The temporary basal rate function is not available in stop mode. To use this function the insulin pump must be in run mode.



**3/7:** If you wish to reduce your current basal rate, select a value between 0% and 90%. If you wish to increase your current basal rate, select a value between 110% and 200%, e.g. if you choose a temporary basal rate of 80%, the current basal rate is reduced by 20%. 100% means no reduction and no increase. Then confirm by tapping .



**4/7:** Select the period of time in which you want to reduce or increase the current basal rate. The period can be set from 15 minutes to 24 hours in steps of 15 minutes.



**5/7:** The percentage of the current basal rate is displayed to you in gray as information under the period of time selected. The YpsoPump® starts the temporary basal rate function after confirmation by tapping . The YpsoPump® vibrates briefly.



If the temporary basal rate function is activated, it is not possible to change a basal rate profile, to switch basal rate profiles, to change a cartridge or to prime the infusion set.



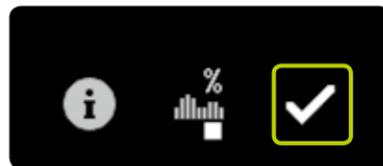
**6/7:** The status screen appears with the actual basal rate. A % sign next to the basal rate profile set indicates that a temporary basal rate function is active.



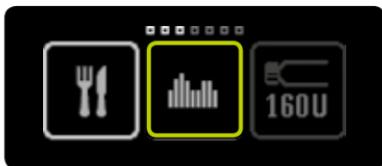
**7/7:** In addition, the period of time remaining and the selected percentage of the basal rate are displayed alternately under the basal rate value.



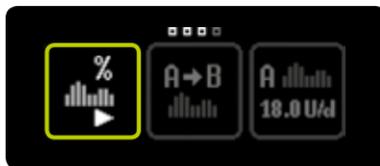
When the temporary basal rate set has completed, a warning appears on the screen. Confirm the warning. The programmed basal rate (A or B) also continues if you do not confirm the warning.



## Canceling the temporary basal rate function



**1/4:** Open the main menu and tap the “Basal rates” icon.



**2/4:** Tap the “Temporary basal rate function activated/cancel” icon.



**3/4:** Confirm cancelation of the temporary basal rate function by tapping . The YpsoPump® vibrates briefly.



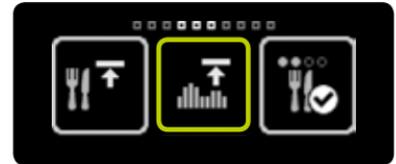
**4/4:** The status screen appears with the basal rate originally programmed.

### 3.6 Setting basal rate limit

With your YpsoPump® it is possible to set a basal rate between 0.00 U/h and 40.0 U/h. Additionally, you can program a maximum hourly basal rate. Using this function, you can set an hourly basal rate up to the set basal rate limit (and not higher) when programming a basal rate profile.



**1/4:** Open the main menu and tap the “Settings” icon.



**2/4:** Swipe to the left and tap the “Set basal rate limit” icon.



**3/4:** Set the basal rate limit that was specified for you by your doctor between 40.0 U/h and 0.05 U/h. Confirm by tapping . The insulin pump vibrates briefly.



**4/4:** The status screen appears.

## 4 Bolus

### Warnings

- ⚠ Only change your specified bolus increment after consulting your doctor or diabetes advisor. Changing your bolus increment accidentally can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ If the bolus is canceled prematurely, the “Bolus canceled” warning appears. Premature cancelation happens if there is an alarm or if the insulin pump is put into stop mode. If your bolus in progress has been canceled prematurely, you can obtain the actual duration and the insulin amount delivered by referring to the therapy data. If you wish to continue the bolus, you must reprogram it following the procedure in this User Guide. Incorrect bolus delivery can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ Take special care when setting a bolus. Control every entry before confirming the bolus delivery. If the bolus is not set properly, this can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ When using the blind bolus function make sure the bolus increment setting is correct beforehand. When entering a blind bolus, do not be distracted. When wearing the insulin pump, make sure the blind bolus function is not activated by accidental pushes on the function button (e.g. in your trouser pocket). The blind bolus function can be deactivated in the settings menu. If you are uncertain whether the blind bolus has been delivered, look up the bolus amount in the therapy data and respond to the delivered amount accordingly. Incorrect bolus delivery can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ Do not set a bolus limit lower than your set bolus increment. A bolus is then not programmable anymore, this can lead to hypoglycemia or hyperglycemia (read warning in the box on page 7).

A bolus is an insulin dose administered in addition to the basal rate. To be able to deliver a bolus the YpsoPump® must be in run mode.

A bolus is administered in the following situations:

- Compensation for meal carbohydrates (a meal bolus).
- Reduction of blood glucose to correct a high blood glucose level.



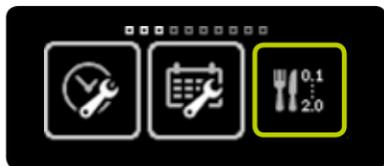
**Use your own therapy settings. The values displayed on the following pages are only examples.**

## 4.1 Setting bolus increment

The bolus increment indicates the increase or decrease in bolus amount per touchscreen gesture. It also indicates the increase in bolus amount for each press of the function button when entering a blind bolus.



**1/4:** Open the main menu and tap the “Settings” icon.



**2/4:** Tap the “Set bolus increment” icon.



**3/4:** Select one of the following bolus increments: 0.1 U, 0.5 U, 1.0 U, 2.0 U. Set the bolus increment value that was specified for you by your doctor. Confirm your setting by tapping . The insulin pump vibrates briefly.



**4/4:** The status screen appears.



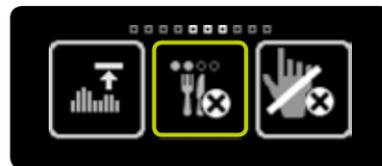
Bear in mind that the bolus increment has a direct influence on the blind bolus function. The bolus increment set equals the insulin amount increase for each press of the function button.

## 4.2 Activating blind bolus

When putting the YpsoPump® into operation for the first time the blind bolus function is always inactive. To use the blind bolus function you must activate it first.



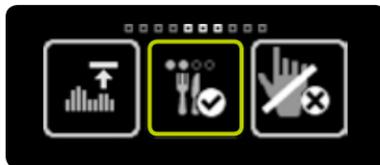
**1/4:** Open the main menu and tap the “Settings” icon.



**2/4:** Swipe to the left and tap the “Blind bolus inactive/activate” icon.



**3/4:** Confirm by tapping . The YpsoPump® vibrates briefly and the blind bolus function can be used. Follow the procedure on page 74.



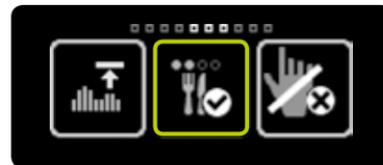
**4/4:** If you open the main menu again, tap the “Settings” icon and swipe to the left, the “Blind bolus active/deactivate” icon now appears.

### 4.3 Deactivating blind bolus

With the YpsoPump® you have the option of deactivating the blind bolus function.



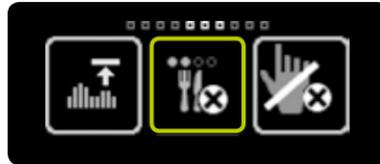
**1/4:** Open the main menu and tap the “Settings” icon.



**2/4:** Swipe to the left and tap the “Blind bolus active/deactivate” icon.



**3/4:** Confirm by tapping . The YpsoPump® vibrates briefly and the blind bolus function is deactivated.



**4/4:** If you open the main menu again, tap the “Settings” icon and swipe to the left, the “Blind bolus inactive/activate” icon now appears.

## 4.4 Bolus types

The YpsoPump® has 4 bolus types:

### Standard bolus

The bolus amount entered is delivered immediately.

### Extended bolus

The bolus amount entered is delivered over an adjustable extension time, spread equally.

### Combination bolus

The total bolus amount entered is split adjustably between a standard bolus and an extended bolus.

### Blind bolus

The blind bolus is a method of standard bolus delivery that can only be programmed by pressing the function button.

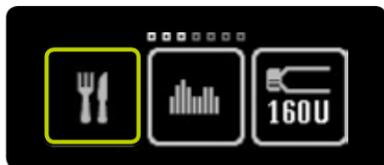
It is possible to deliver a standard bolus or a blind bolus when an extended portion of a bolus is in progress. A standard or blind bolus always has priority over an extended portion of a bolus. If you deliver a standard or blind bolus when an extended portion of a bolus is in progress, the standard or blind bolus is displayed on the status screen. After its delivery, the status screen switches back to the remaining amount of the extended portion of a bolus.



In the settings menu you have the option to set a bolus limit between 30.0 U and 0.1 U. Using this function, you can set a bolus amount up to the set bolus limit (and not higher) when programming a bolus (see chapter 4.6, page 82). The set bolus limit applies to all bolus types.



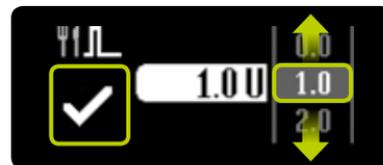
## Standard bolus



**1/4:** Open the main menu and tap the “Bolus” icon.



**2/4:** Tap the “Standard bolus” icon.



**3/4:** Select a bolus amount between 0.1 U and 30.0U. Bolus delivery commences immediately as soon as you confirm by tapping . If the default value of 0.0U is confirmed, the standard bolus is canceled. The Ypsopump® vibrates briefly.

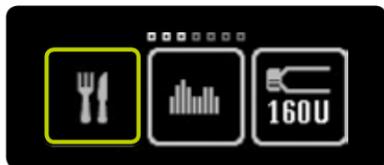


All bolus types functions are not available if the insulin pump is in stop mode, if the cartridge is empty, if the remaining insulin amount in the cartridge is smaller than the bolus increment setting or if the bolus limit setting is lower than the bolus increment setting. Bear in mind that entering a minimum bolus amount is directly dependent on the bolus increment setting. If the bolus increment is set to 1.0 U, for example, the minimum bolus amount that can be set for a standard bolus is also 1.0 U.



**4/4:** The YpsoPump® counts down the remaining units on the status screen. You can cancel a bolus in progress at any time by tapping . Cancellation must always be confirmed by tapping .

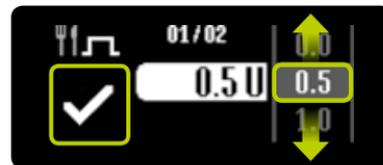
## Extended bolus



**1/6:** Open the main menu and tap the “Bolus” icon.



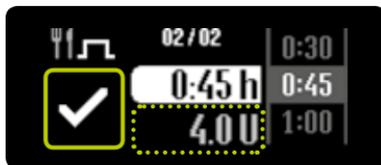
**2/6:** Tap the “Extended bolus” icon.



**3/6:** Select a bolus amount between 0.1 U und 30.0U and confirm by tapping . If the default value of 0.0U is confirmed, the extended bolus is canceled.



**4/6:** Select the extension time during which you wish to deliver the bolus amount selected. The extension time can be set from 15 minutes to 12 hours in steps of 15 minutes.

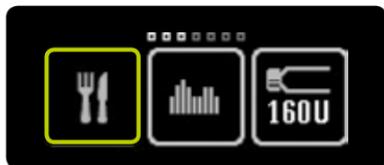


**5/6:** The set bolus amount is displayed in gray below the extension time selected. The YpsoPump® starts bolus delivery after confirmation by tapping . The YpsoPump® vibrates briefly.



**6/6:** The YpsoPump® counts down the remaining units on the status screen. In addition, the remaining extension time of the extended bolus is displayed. You can cancel a bolus in progress at any time by tapping . Cancellation must always be confirmed by tapping .

## Combination bolus



**1/8:** Open the main menu and tap the “Bolus” icon.



**2/8:** Tap the “Combination bolus” icon.

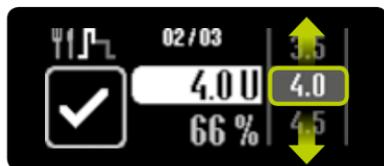


**3/8:** Select a total bolus amount between 0.2U and 30.0U and confirm by tapping . If the default value of 0.0U is confirmed, the combination bolus is canceled.

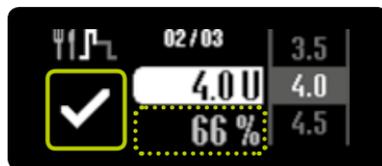


The combination bolus function cannot be performed if the remaining insulin amount in the cartridge or the bolus limit setting is smaller than twice the bolus increment setting (minimum amount for combination bolus is twice the bolus increment).





**4/8:** Select the bolus amount that you want to deliver directly (immediate portion).



**5/8:** The percentage of the immediate portion is displayed in gray under the bolus amount selected. This bolus amount must be confirmed by tapping .



**6/8:** Select the extension time during which you wish to deliver the remaining portion of the bolus amount (extended portion). Extension time can be set from 15 minutes to 12 hours in steps of 15 minutes.



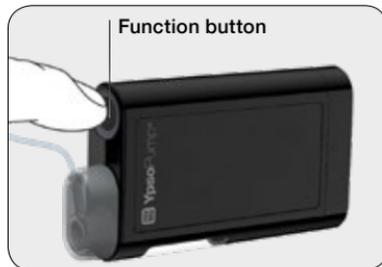
**7/8:** The bolus amount of the extended portion is displayed in gray below the extension time selected. The YpsoPump® starts bolus delivery after confirmation by tapping . The insulin pump vibrates briefly.



**8/8:** The YpsoPump® counts down the remaining units on the status screen. The immediate portion of the bolus is delivered first. It is followed by the extended portion. In addition, the remaining extension time of the extended bolus is displayed. You can cancel a bolus in progress at any time by tapping . Cancellation must always be confirmed by tapping .

### Blind bolus

You have the option of programming a bolus only by pressing the function button, without using the touchscreen. This means you can deliver a bolus discreetly, when the YpsoPump® is in your trouser pocket, for example. Make sure the blind bolus function has been activated according to the procedure on page 62.



**1/7:** Give the function button one long press until the YpsoPump® emits a long vibration signal.

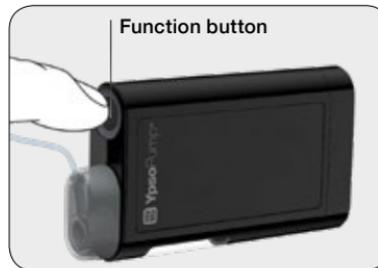


The blind bolus function is not available in stop mode. Make sure the insulin pump is in run mode. The blind bolus function is not available if the cartridge is empty, if the remaining insulin amount in the cartridge is smaller than the bolus increment setting or if the bolus limit setting is lower than the bolus increment setting, nor if the insulin pump displays an alarm or a warning. To activate the blind bolus function follow the procedure on page 62. To deactivate the function follow the procedure on page 64.



**2/7:** You are now in the blind bolus menu. Here you can set the bolus amount required. Begin with entering an amount within 4 seconds. The elapsed time is displayed to you by dots turning gray.

If you fail to set a bolus amount within 4 seconds, the blind bolus menu disappears automatically and programming is canceled. This is indicated by three short vibrations.



**3/7:** Set the bolus amount required by giving the function button a short press for each step of increase. The insulin pump confirms each function button press with a short vibration. For each function button press, the bolus amount is increased depending on the bolus increment you have set. The maximum bolus amount is 30.0U.



**Giving the function button a long press may launch the blind bolus menu accidentally, if the blind bolus function was previously activated in the settings. If you do not react within 4 seconds, the blind bolus menu disappears. It is not possible to program the blind bolus in the main menu or in a submenu.**



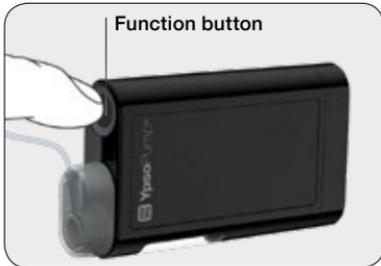
**4/7:** Each bolus amount set is displayed to you on the screen. When you have entered the bolus amount required, you have to wait 4 seconds. The elapsed time is displayed to you by dots turning gray.



**5/7:** The YpsoPump® confirms each step of increase with a short vibration signal.



When entering a bolus that exceeds the maximum amount that can be set, blind bolus programming is canceled with three short vibrations.



**6/7:** After a period of 4 seconds a long vibration signal is emitted. By giving the function button a long press, bolus delivery is confirmed. The long function button press must take place within 4 seconds after the long vibration signal. By giving the function button a short press or not reacting to the vibration signal, you have the option of quitting the blind bolus menu without any bolus delivery. This is indicated by three short vibrations.



**7/7:** You can cancel a bolus in progress at any time by tapping . Cancellation must always be confirmed by tapping .



If the screen of your YpsoPump® is switched on during blind bolus programming: the blind bolus delivery in progress is displayed on the screen.

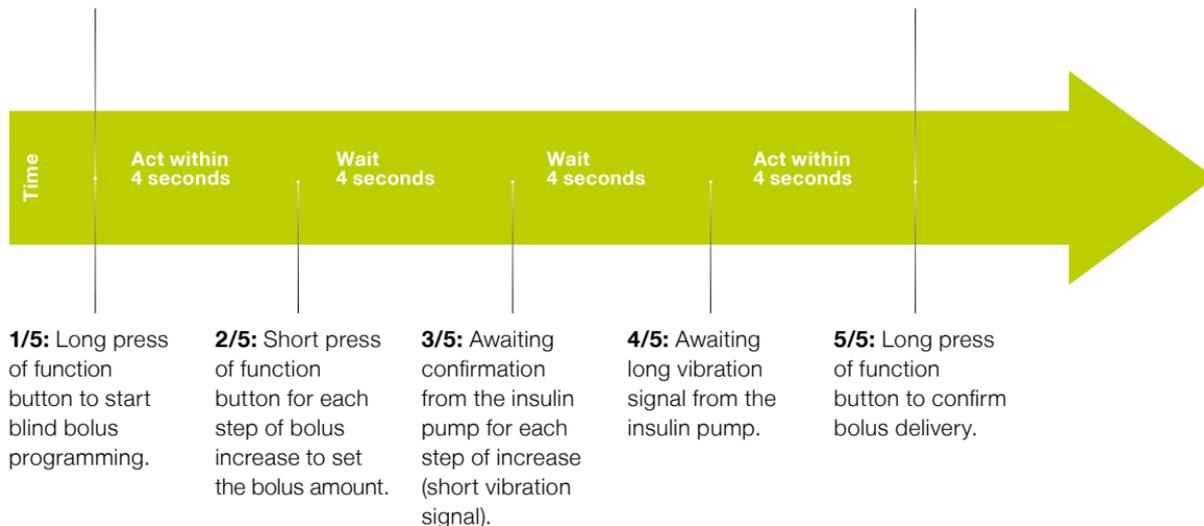
If the screen of your YpsoPump® is switched off during blind bolus programming: the blind bolus delivery in progress is not displayed on the screen.

Give the function button a short press to switch on the screen and see the blind bolus in progress.

## Blind bolus programming at a glance

Start programming

Blind bolus delivery



## 4.5 Display of last bolus



**1/4:** Swipe to the right on the status screen to display the last bolus delivered. The last bolus delivered can only be displayed if no bolus is active.



**2/4:** The icon of the bolus type appears on the left of the screen, the relevant value in the middle. The delivery time and delivery date are shown at the top on a white background. By swiping to the left you can quit the display of last bolus at any time and return to the status screen.



**3/4:** Example of an extended bolus: if a bolus on the display of last bolus shows multiple items of information, they are displayed under each other.



When a bolus function is active, it is not possible to display the last bolus delivered.



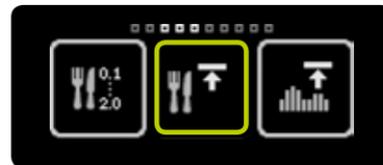
**4/4:** Example of a combination bolus: the display of the percentage value of the immediate portion alternates with the display of the extension time of the extended portion at intervals of 2 seconds.

## 4.6 Setting bolus limit

With your YpsoPump® it is possible to set a bolus amount between 0.1 U and 30.0 U. Additionally, you can program a maximum bolus amount. Using this function, you can set a bolus amount up to the set bolus limit (and not higher) when programming a bolus. The set bolus limit applies to all bolus types.



**1/4:** Open the main menu and tap the “Settings” icon.



**2/4:** Swipe to the left and tap the “Set bolus limit” icon.



**3/4:** Select a value between 30.0 U and 0.1 U which you would like to set as the maximal programmable bolus. Confirm by tapping . The insulin pump vibrates briefly.



**4/4:** The status screen appears.



If the bolus limit setting is lower than the bolus increment setting, the bolus icon is inactive and the function cannot be performed. If the bolus limit setting is set by value of 0.0, no bolus can be performed.



## 5. Changing the infusion set and cartridge

### Warnings

- ⚠ Only rapid-acting insulin at a concentration of 100 U/ml (NovoRapid®, Humalog®, Apidra®) may be used with the YpsoPump® system. Using different insulin can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). If you use different insulin, change the cartridge as well as the primed infusion set and continue therapy with the correct type of insulin.
- ⚠ With the YpsoPump® you may only use the self-filled 1.6-ml reservoir YpsoPump® Reservoir that is compatible with the YpsoPump®. Using a different cartridge which is not declared by the manufacturer to be compatible with YpsoPump® can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). In this case, change the cartridge.
- ⚠ Never use tools or instruments to remove the cartridge or the infusion set. They could damage the drive or the housing of the YpsoPump® and compromise its operability. If the insulin pump is damaged, the correct delivery of insulin cannot be guaranteed; this can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). Ensure that your delivery of insulin is as recommended by your doctor or diabetes advisor and consult Customer Service. You will find the contact details on the back of this User Guide as well as on page 10.
- ⚠ Ensure the use of the correct drug solution and check the label of the vial before filling the YpsoPump® Reservoir.

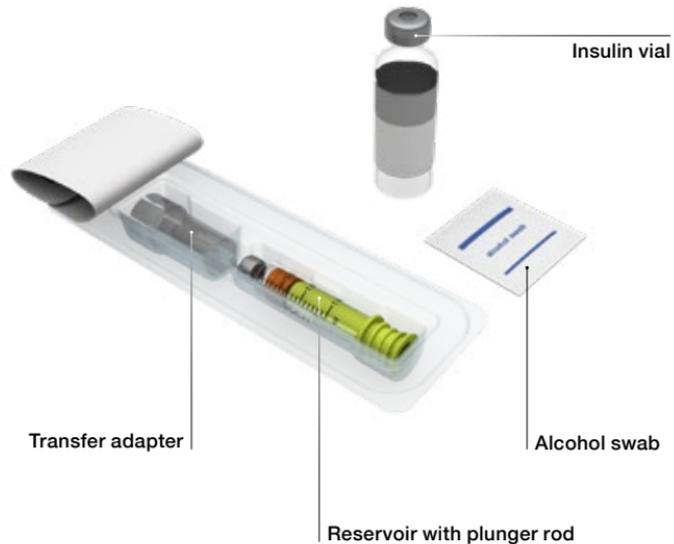
- ⚠ Remove air bubbles from the reservoir of the YpsoPump® Reservoir prior to insertion into the YpsoPump®.
- ⚠ Never pull the plunger of the YpsoPump® Reservoir further than the 1.6-ml mark. If you pull the plunger further than the 1.6-ml mark, it may fall out or air may get into the reservoir, thus making it impossible to perform priming properly. In addition, the reservoir may no longer be sterile. If you have pulled the plunger further than the 1.6 ml mark, cancel priming, dispose of the reservoir and fill a new reservoir.
- ⚠ Choking hazard: keep the cartridge out of the reach of children.
- ⚠ Using an infusion set which is not declared by the manufacturer to be compatible with YpsoPump® can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). If you use an infusion set which is not compatible, change the infusion set.
- ⚠ Always make sure the tubing is disconnected from your body when you change the cartridge and prime the tubing. Priming with connected tubing may accidentally lead to an uncontrolled dosage of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). If the tubing is connected to your body during priming, immediately stop the priming procedure and disconnect the tubing from your body before continuing with priming.

- ⚠ Monitor the entire priming procedure continuously until the tubing of the infusion set has been filled without any air bubbles and until insulin emerges from the end of the tubing. If there are still air bubbles in the tubing or the adapter, repeat the priming procedure. Air bubbles can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ The “Prime tubing” and “Prime cannula” functions must never be used for bolus delivery – their sole purpose is to prime the tubing and cannula without bubbles. Misuse of these functions can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7).

## 5.1 YpsoPump® Reservoir

The YpsoPump® Reservoir is intended to be filled with a rapid-acting insulin at a concentration of 100 U/ml (NovoRapid®, Humalog®, Apidra®) and used with the YpsoPump® insulin pump.

The following components are required in order to use the YpsoPump® Reservoir:



### **Filling the YpsoPump® Reservoir**

The YpsoPump® Reservoir is sterile provided that the packaging has neither been opened nor damaged.

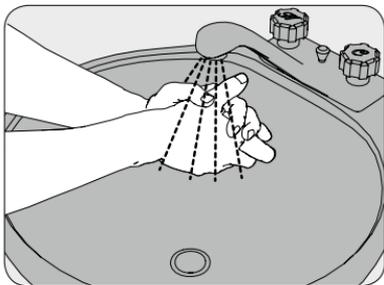
If the packaging shows signs of damage, use a different reservoir. The reservoir is solely intended for single use.



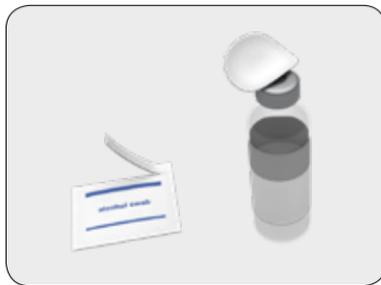
To prevent risk of infection, never pull the stopper beyond the 1.6-ml mark and do not reuse the transfer adapter or the reservoir.



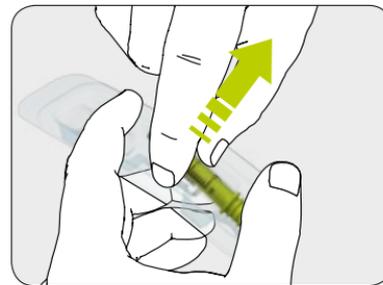
Follow the instructions for use of the YpsoPump® Reservoir and the YpsoPump® Orbit® infusion sets, especially the information in the “Warning” category and the explanations of the symbols on the packaging.



**1/12:** Wash your hands thoroughly with soap and water.



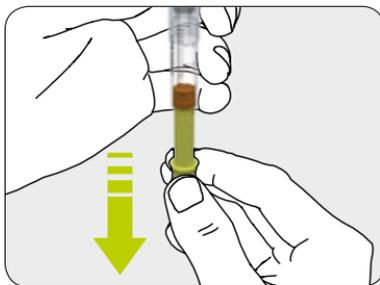
**2/12:** Clean the septum of the insulin vial with an alcohol swab.



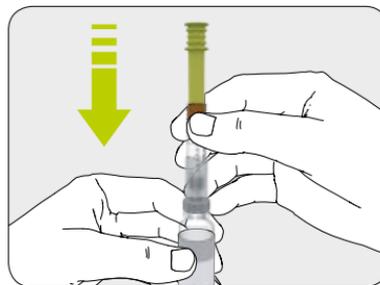
**3/12:** Remove the reservoir and the transfer adapter from the packaging (see page 87) without touching the septum.



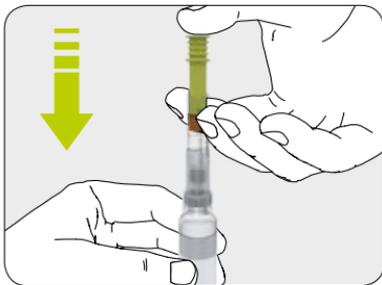
**4/12:** Attach the transfer adapter to the reservoir and advance the stopper all the way forward.



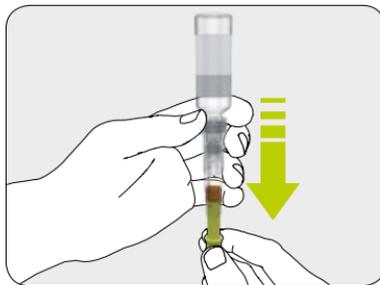
**5/12:** Then pull the plunger rod backwards until the entire reservoir is filled with air.



**6/12:** Attach the other end of the transfer adapter to the insulin vial.



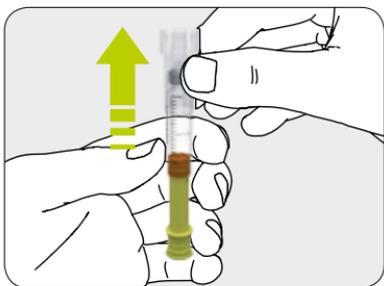
**7/12:** Inject all of the air into the insulin vial. This will make it easier to then withdraw insulin from the vial.



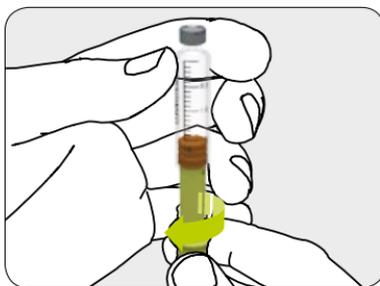
**8/12:** Turn the reservoir, including the insulin vial, upside down. Very gently draw the insulin into the reservoir.



**9/12:** Check the reservoir for air bubbles. If air bubbles are in the reservoir, carefully tap the side of the reservoir. Then press the plunger rod to push the air bubbles out of the reservoir. Repeat if necessary.



**10/12:** Remove the transfer adapter from the vial. Dispose of the transfer adapter in accordance with local laws.



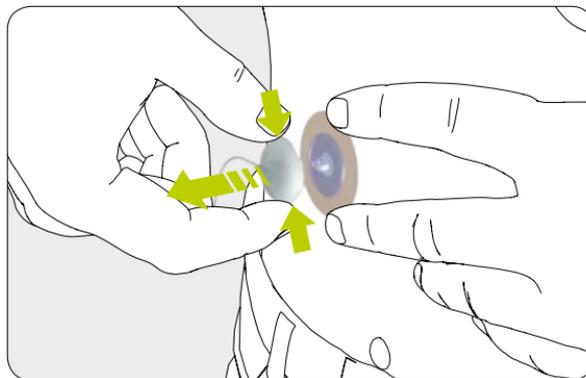
**11/12:** Twist off the plunger rod and dispose of it.



**12/12:** Follow the instructions on page 98 in order to insert the reservoir into the YpsoPump®.

## 5.2 Disconnecting the infusion set

The YpsoPump® Orbit®soft and YpsoPump® Orbit®micro infusion sets can be easily disconnected and reconnected, offering you the option of removing the insulin pump and tubing to take a bath, a shower or do sports.



Gently press on the two marked sides of the cap and the tubing cap will disconnect from the infusion site.

### 5.3 Changing the infusion set

The YpsoPump® Orbit®soft infusion set should not be used for more than 72 hours.

The YpsoPump® Orbit®micro infusion set should not be used for more than 48 hours.

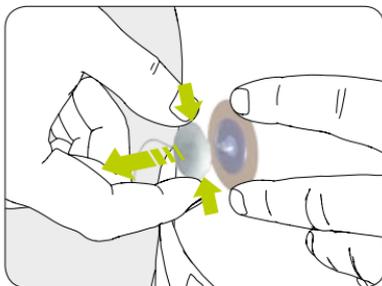
- When changing the infusion set, the insulin pump can either be in stop mode or in run mode.
- Disconnect the infusion set as described in the instructions on page 93 and carefully remove the tape from your body.
- Then follow the steps on page 95.
- Before attaching the tubing to your body, please make sure the tubing is filled with insulin without any air bubbles.
- Dispose of the introducer needle (YpsoPump® Orbit®soft), the used cannula base and the used tubing with adapter according to the instructions given by your doctor or diabetes advisor and in compliance with the local regulations for disposing of needles and sharp or pointed objects.



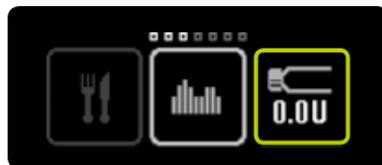
Only use the YpsoPump® Orbit®soft and YpsoPump® Orbit®micro infusion sets for therapy with the YpsoPump®. All tubing and cannula lengths of these products are compatible with the YpsoPump®.

## 5.4 Changing the cartridge

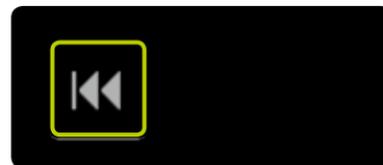
### Removing the cartridge



**1/7:** Always disconnect the infusion set from your body first according to the instructions on page 93.



**2/7:** Open the main menu and tap the “Cartridge change and current cartridge level” icon.



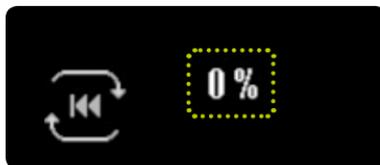
**3/7:** Tap the “Return threaded rod” icon.



With your YpsoPump®, you are not required to change your infusion set every time you change your cartridge. They can be changed independently.



**4/7:** Confirm by tapping .  
The YpsoPump® vibrates briefly.



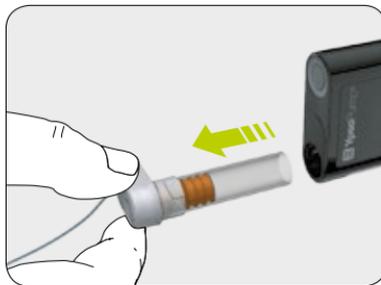
**5/7:** The threaded rod returns and the percentage is reduced to 0%. Then the self-test is performed (as described on page 32).



Do not insert the new cartridge until the threaded rod has completely returned and the YpsoPump® has successfully performed the self-test. If you insert the cartridge while the threaded rod is still returning, the insulin pump may display the message “Threaded rod return not completed”. In this case repeat the cartridge change.



**6/7:** Disconnect the infusion set by turning the adapter on the YpsoPump® counterclockwise until it stops.



**7/7:** Remove the empty cartridge from the YpsoPump® and dispose of it in accordance with your national environmental protection regulations.

### Inserting the cartridge

For the YpsoPump® you may only use a self-filled 1.6-ml reservoir YpsoPump® Reservoir compatible with the YpsoPump®.



**1/2:** Hold the YpsoPump® upright with the opening of the cartridge compartment facing upwards. Insert a self-filled 1.6-ml reservoir.

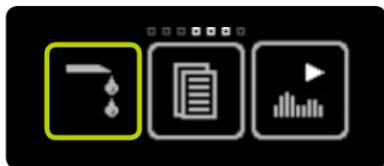


**2/2:** Place the adapter on the inserted cartridge upright. Turn the adapter clockwise to the lock position. You should hear a soft click and/or feel a definite mechanical stop.



When putting the YpsoPump® into operation for the first time or when taking the insulin pump into operation after storage status, the threaded rod must be returned prior to inserting the cartridge. Follow the procedure on page 95.

## 5.5 Priming the infusion set



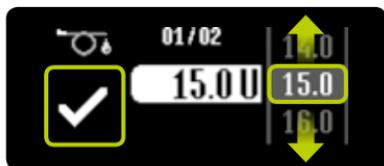
**1/6:** Open the main menu and tap the “Prime infusion set” icon.



**2/6:** Tap the “Prime tubing” icon.



Refer to the instructions for use of your YpsoPump® Orbit® infusion set for the correct priming volume. The priming volume indicated there is for guidance only. It is important that the system is primed free of air and that insulin emerges from the end of the tubing. It may happen that more insulin has to be delivered than the priming volume initially set.



**3/6:** The screen for setting the priming volume appears. For the priming volume, select a value that is suitable for your infusion set, between 1.0U and 30.0U. Confirm by tapping .

#### **Priming volume when only changing the cartridge:**

Check the cartridge for air bubbles. If the cartridge contains air bubbles, select the appropriate priming volume according to the instructions for use of your YpsoPump® Orbit® infusion set, until there are no more air bubbles in the cartridge, in the adapter and in the tubing. If the cartridge does not contain any air bubbles, prime the minimum priming volume of 1.0U.

#### **Priming volume when**

**changing the infusion set:** For the priming volume, select a value that is suitable for your infusion set according to the instructions for use of your YpsoPump® Orbit® infusion set.



With your YpsoPump®, you are not required to change your infusion set every time you change your cartridge. They can be changed independently.



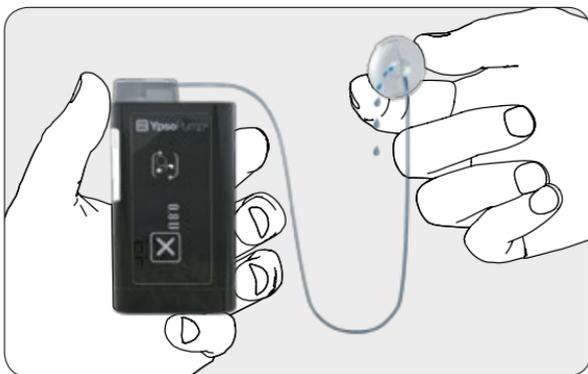
**4/6:** Confirm that you have disconnected the infusion set from your body by removing the tubing cap from the cannula base and confirm by tapping . The YpsoPump® vibrates briefly, the threaded rod advances up to the plunger of the cartridge and the infusion set is primed with the set amount of insulin.



**5/6:** During the priming procedure, keep the insulin pump in an upright position, with the adapter facing upwards and tap the insulin pump lightly on your open palm to remove the air bubbles from the infusion set. The screen counts the delivered priming volume upwards until the set value has been reached. You can cancel the priming procedure at any time by tapping .



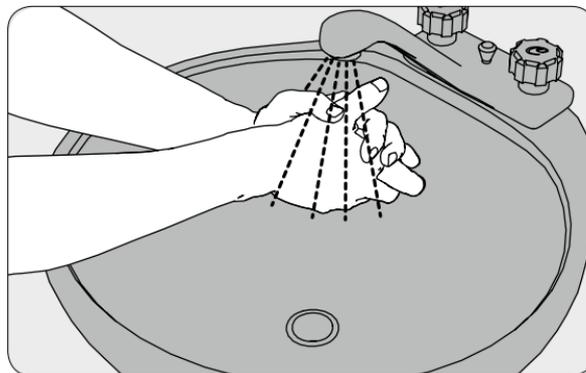
If the temporary basal rate function or a bolus is activated, the prime infusion set function is not available. The prime infusion set function also cannot be executed if the cartridge is empty.



**6/6:** Repeat the priming procedure with the appropriate priming volume until there are no more air bubbles in the cartridge, in the adapter or in the tubing and until insulin has emerged from the end of the tubing of the infusion set.

## 5.6 Attaching the infusion set to your body

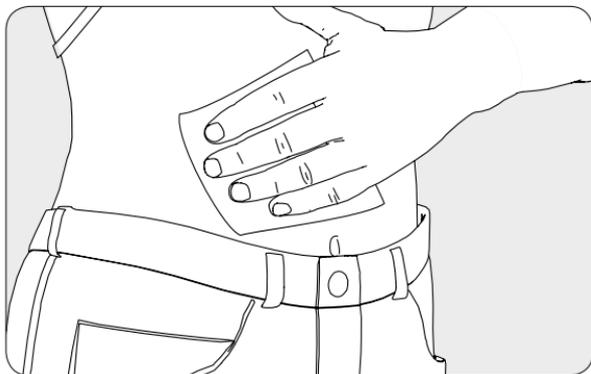
If insulin has emerged from the end of the tubing and there are no more bubbles of air in the cartridge, in the adapter or in the tubing, attach the infusion set to your body.



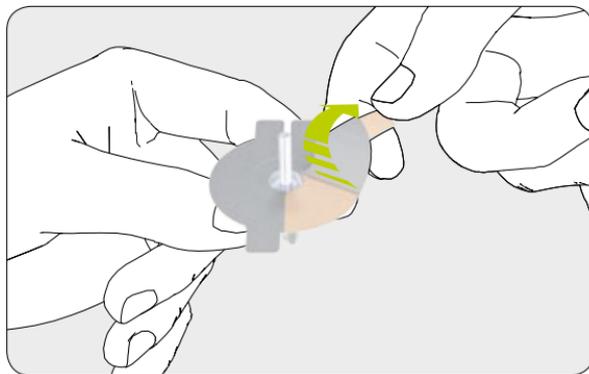
**1/12:** Wash your hands thoroughly.



These abridged instructions are intended to be a recommendation. For detailed information, notes and warnings please refer to the instructions for use of the relevant YpsoPump® Orbit® infusion set (YpsoPump® Orbit®soft and YpsoPump® Orbit®micro).



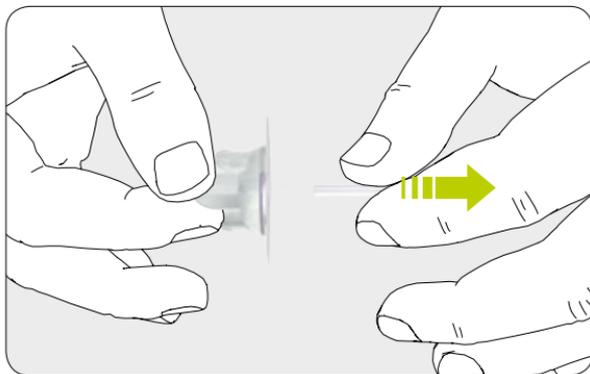
**2/12:** Clean and disinfect the infusion site with an isopropyl alcohol swab (70%). Before continuing, make sure there are no hairs on the site and that the infusion site is dry.



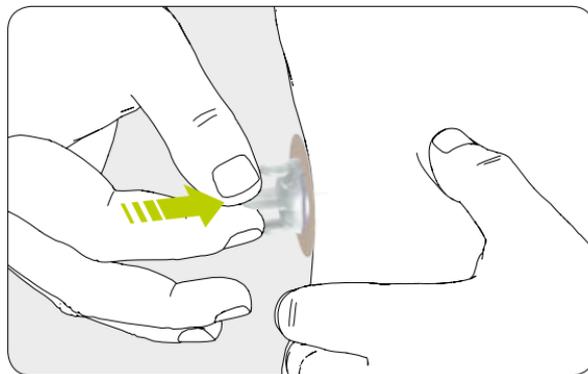
**3/12:** Peel the protective foil off the tape carefully. Make sure you do not touch the adhesive film.



We recommend you to use a 70%-isopropyl-alcohol swab. The use of 70% isopropyl supports the optimal adhesion of the tape. The use of other alcohol pads has not been tested and may result in premature tape failure and interruption of insulin delivery.



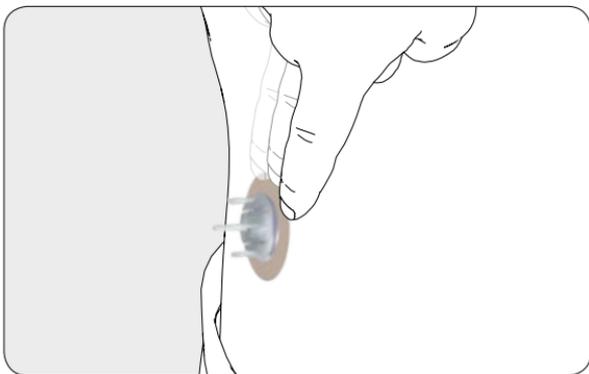
**4/12:** Remove the cannula protector from the cannula carefully.



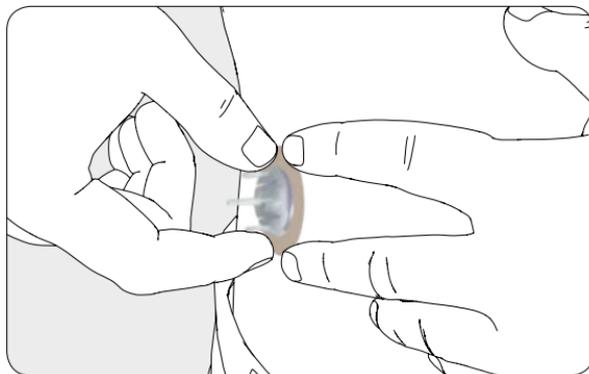
**5/12:** Stabilize the infusion site and insert the cannula at an angle of 90° or alternatively use the appropriate inserter for the infusion set.



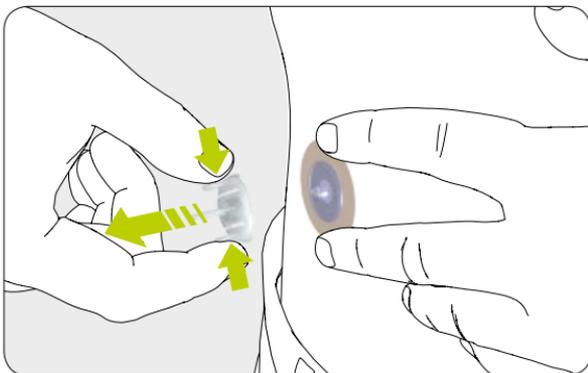
The YpsoPump® Orbit®micro has a steel cannula that can be applied to the body without any additional introducer needle. To facilitate skin penetration with the YpsoPump® Orbit®soft and YpsoPump® Orbit®micro infusion sets use the Orbit®Inserter.



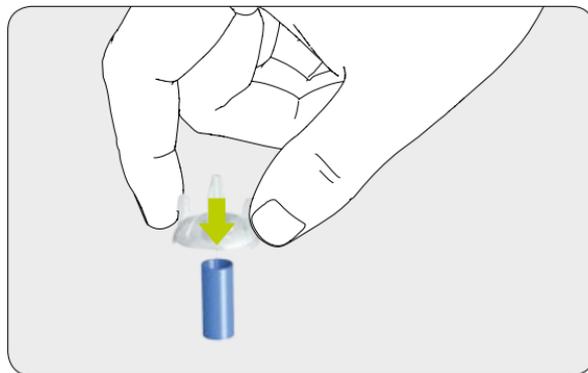
**6/12:** Press the tape onto the skin and run your fingers over the tape for a few seconds to optimize adhesion.



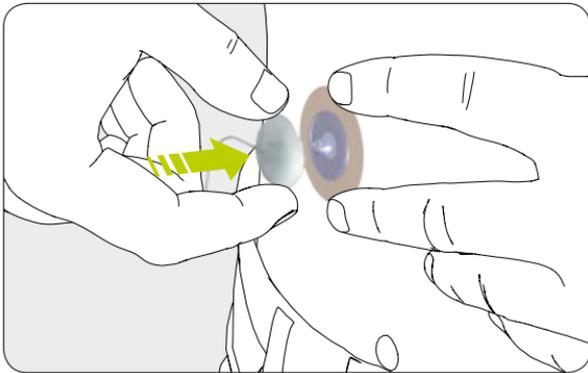
**7/12:** Press the tape onto the skin with one hand and grasp the introducer cap with two fingers of your other hand.



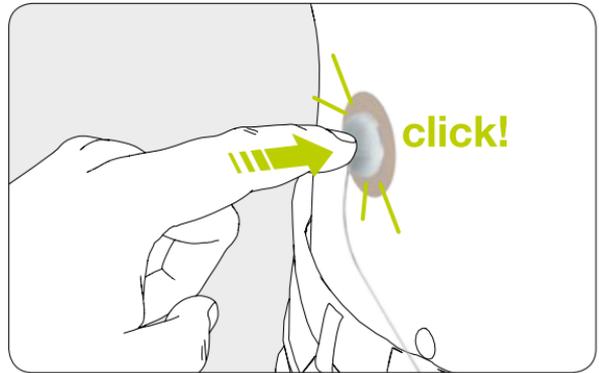
**8/12:** Carefully remove the introducer needle (YpsoPump® Orbit®soft) or the introducer cap (YpsoPump® Orbit®micro) by pressing on the two outer wings of the introducer cap and pull it from the infusion site.



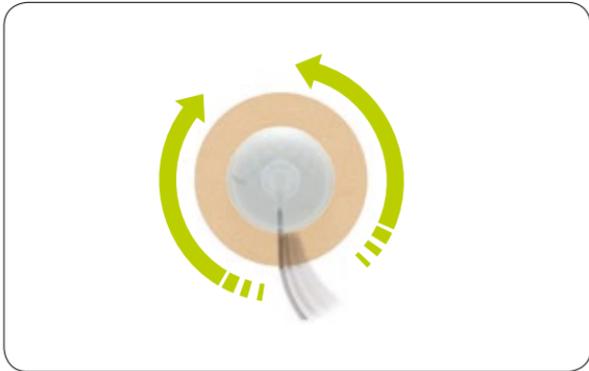
**9/12:** Cover the removed introducer needle with the blue protection cap and dispose of it in a safety bin.



**10/12:** Attach the tubing cap straight to the cannula base of the infusion set.



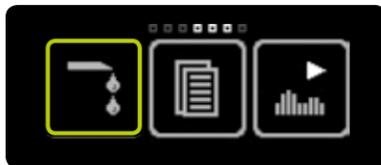
**11/12:** Make sure you hear it click into place.



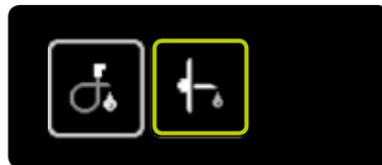
**12/12:** Rotate the tubing left and right, at least one full turn in each direction while pulling upward on the cap, to ensure the tubing cap is fully engaged and the fluid path is opened.

## 5.7 Priming the cannula

After having attached the infusion set to your body, the cannula has to be primed with insulin.



**1/4:** Open the main menu and tap the “Prime infusion set” icon.



**2/4:** Tap the “Prime cannula” icon.



**3/4:** The screen for setting the priming volume appears. For the priming volume, select a value that is suitable for your cannula, between 0.1 U and 1.0 U, according to the instructions for use of your YpsoPump® Orbit® infusion set. Confirm by tapping . The YpsoPump® vibrates briefly and the cannula is primed with the set amount of insulin.



**4/4:** During the priming procedure, the screen counts the delivered priming volume upwards until the set value has been reached. You can cancel the priming procedure at any time by tapping .

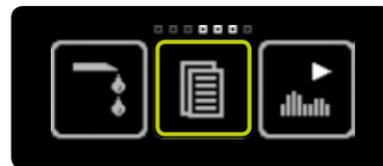
## 6 Data/History

You can view the saved events in the data menu.

The YpsoPump® has a data backup that typically covers at least 6 months. A distinction is made between “Therapy data” and “Alarm history”. Therapy data comprise records of all therapy-relevant events such as bolus delivery, priming procedure or change in basal rates.

Alarm history lists all the alarms that have taken place. If the number of events exceeds the maximum number, the oldest events are overwritten.

### 6.1 Therapy data



**1/6:** Open the main menu and tap the “Data” icon.



**Therapy data: 500 events displayed (total of 3000 stored in the insulin pump).**  
**Alarm history: 100 events displayed (total of 200 stored in the insulin pump).**



**2/6:** Tap the “Therapy data” icon.



**3/6:** For each event, the time of day and date are displayed inverted. As a result you can distinguish the event from a current display.

The icon for the event appears on the left of the screen, the relevant value in the middle. By swiping to the right you can quit therapy data at any time. All the possible events are listed in the table on page 116.

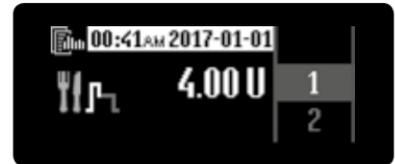
In the therapy data, functions still in progress are marked by the triangular symbol under the icon.

**Example: combination bolus**

Three screens each containing different information are displayed one after the other at intervals of 2 seconds:



**4/6:** Display of total bolus amount.



**5/6:** Display of immediate portion.



**6/6:** Display of extended portion and extension time.



Remember to back up your therapy data regularly to prevent any loss of events.

## Possible events in therapy data



Basal rate limit changed



Battery removed



Bolus increment changed



Bolus limit changed



Combination bolus



Date changed



Extended bolus



Hourly value from basal rate profile A changed  
(1 event for each hourly value changed)



Hourly value from basal rate profile B changed  
(1 event for each hourly value changed)



Primed cannula



Primed tubing



Standard bolus or blind bolus



Switched from basal rate profile A to basal rate profile B



Switched from basal rate profile B to basal rate profile A



Switched to run mode



Switched to stop mode



Temporary basal rate function



Threaded rod returned



Time of day changed



Total insulin amount per day (basal and bolus)

---

## 6.2 Alarm history



**1/3:** Open the main menu and tap the “Data” icon.



**2/3:** Tap the “Alarm history” icon.



**3/3:** For each event, the time of day and date are displayed inverted. As a result you can distinguish the event from a current display.

The icon for the event appears on the left of the screen. By swiping to the right you can quit the alarm history at any time. All the possible events are listed in the table on page 119.

### Possible events in alarm history



Auto stop



Battery empty



Battery not suitable



Cartridge empty



Charge internal rechargeable battery



Electronic error



No battery



No insulin



Occlusion

## 7 Functions and settings

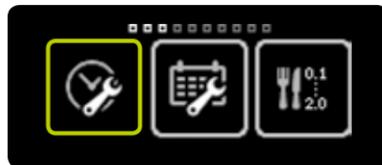
### Warnings

- ⚠ Take special care when setting the time. If a wrong time of day is set, the times of the basal rate profile could be shifted. Only make changes to your settings after consulting your doctor or diabetes advisor. Incorrect programming of the insulin pump can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7).
- ⚠ Only use AAA alkaline batteries (LR03) with your YpsoPump®. Make sure the battery is not damaged. A damaged battery could result in a short circuit. If a different type of battery (e.g. a lithium battery or an NiMH rechargeable battery) or a damaged battery is inserted, there is no guarantee that the insulin pump will be put into operation or operate properly; the advance warning time up to the “Battery empty” alarm (page 163) cannot be maintained when a battery is discharged. This can lead to failure of the preset insulin delivery, which can cause hyperglycemia (read warning in the box on page 7). Make sure to always carry a replacement battery with you.
- ⚠ For patients who do not self-manage their diabetes, the access lock function should always be activated when the insulin pump is not being used by a caregiver. The access lock function is intended to prevent inadvertent operation that may lead to insulin delivery or changes in the insulin pump settings. Inadvertent operation can potentially lead to hypoglycemic or hyperglycemic events (read warning in the box on page 7).
- ⚠ Choking hazard: keep the battery and the battery compartment lid out of the reach of children.

## 7.1 Changing the time of day



**1/3:** Open the main menu and tap the “Settings” icon.



**2/3:** Tap the “Time of day” icon.

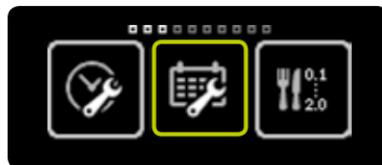


**3/3:** Set the current time of day, confirm by tapping  and the YpsoPump® will vibrate briefly. The time of day set is entered in the therapy settings.

## 7.2 Changing the date



**1/3:** Open the main menu and tap the “Settings” icon.



**2/3:** Tap the “Date” icon.



**3/3:** Set the current date (year, month, day). Confirm your setting by tapping .



The values displayed are only examples. Always use your own settings. You can adjust the time of day and the date at any time in the settings menu. If you select an impossible date (e.g. 2017-02-30), the confirmation icon will be inactive (gray) and you cannot confirm the date.



## 7.3 Access lock

The access lock function offers access protection (e.g. for children).

When the access lock function is activated, only the following YpsoPump® functions can be operated:

- Data: View therapy data and alarm history
- Settings: Rotate screen
- Settings: Deactivate access lock function

The following YpsoPump® functions cannot be operated when the access lock function is activated:

- All types of bolus delivery
- Temporary basal rate function
- Programming and switching basal rate profiles
- Returning threaded rod for cartridge change
- Priming infusion set and cannula
- Switch to run or stop mode
- Time and date settings
- Bolus increment settings
- Bolus limit settings
- Basal rate limit settings
- Activate/deactivate blind bolus
- Activate/deactivate Bluetooth®
- Bluetooth® pairing

The icons for these functions are shaded gray in the menu.

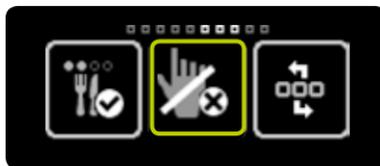


**Basal rate delivery continues when the access lock is activated.**

## Activating access lock



**1/5:** Open the main menu and tap the “Settings” icon.



**2/5:** Swipe to the left and tap the “Access lock inactive/activate” icon.



**3/5:** Confirm by tapping . The YpsoPump® vibrates briefly and the access lock function is activated.



**4/5:** The status screen appears. The activated access lock function is visualized by an access lock icon at the top of the screen.



**5/5:** If you open the main menu again, tap the “Settings” icon and swipe to the left, the “Access lock active/deactivate” icon now appears.



When the access lock function is activated, all inactive icons are displayed in a darker gray. This means the function is not available and cannot be selected.



## Deactivating access lock



**1/5:** Open the main menu and tap the “Settings” icon.



**2/5:** Swipe to the left and tap the “Access lock active/deactivate” icon.



**3/5:** Confirm by tapping . The YpsoPump® vibrates briefly and the access lock function is deactivated.



**4/5:** The status screen appears. The access lock icon at the top of the screen disappears. All icons are now active and the functions can be operated again.



**5/5:** If you open the main menu again, tap the “Settings” icon and swipe to the left, the “Access lock inactive/activate” icon now appears.

## 7.4 Rotating the screen by 180°

You have the option of rotating the screen of the YpsoPump® by 180°.



**1/3:** Open the main menu and tap the “Settings” icon.



**2/3:** Swipe to the left and tap the “Rotate screen” icon.



**3/3:** Confirm by tapping . The YpsoPump® vibrates briefly and the orientation of the screen is rotated by 180°.

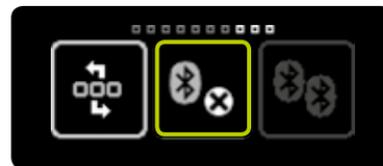
## 7.5 Bluetooth®

### Activating Bluetooth®

Use the Bluetooth® function to transfer your therapy data from your YpsoPump® to another supported Bluetooth® enabled device. If you want to use the Bluetooth® connection to a Bluetooth® enabled device, the Bluetooth® interface must firstly be activated on the YpsoPump®.



**1/5:** Open the main menu and tap the “Settings” icon.



**2/5:** Swipe to the left and tap the “Bluetooth® inactive/activate” icon.



**3/5:** Confirm by tapping . The YpsoPump® vibrates briefly and the Bluetooth® function is activated.



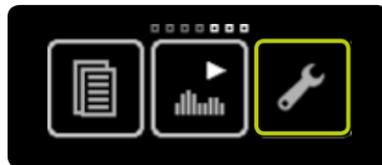
**4/5:** The status screen appears. The activated Bluetooth® function is visualized by a Bluetooth® icon at the top of the screen.



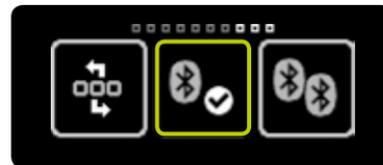
**5/5:** If you open the main menu again, tap the “Settings” icon and swipe to the left, the “Bluetooth® active/deactivate” icon now appears.

## Deactivating Bluetooth®

If you do not want to use any Bluetooth® enabled devices with the YpsoPump®, the Bluetooth® interface can be deactivated.



**1/5:** Open the main menu and tap the “Settings” icon.



**2/5:** Swipe to the left and tap the “Bluetooth® active/deactivate” icon.



**3/5:** Confirm by tapping . The YpsoPump® vibrates briefly and the Bluetooth® function is switched off.



**4/5:** The status screen appears. The Bluetooth® icon at the top of the screen disappears.



**5/5:** If you open the main menu again, tap the “Settings” icon and swipe to the left, the “Bluetooth® inactive/activate” icon now appears.

## Bluetooth® pairing

The first time you establish Bluetooth® connectivity between the YpsoPump® and another Bluetooth® enabled device, you have to enter an identification code to allow Bluetooth® connection between the two devices. To use the Bluetooth® pairing function, the Bluetooth® function must be activated. It is possible to pair a maximum of 5 Bluetooth® enabled devices with the YpsoPump®.



**1/6:** Open the main menu and tap the “Settings” icon.



**2/6:** Swipe to the left and tap the “Bluetooth® pairing” icon.



**3/6:** The YpsoPump® is ready for Bluetooth® pairing and waits for the pairing request of the Bluetooth® enabled device.

If the release does not take place within 2 minutes, the screen lock is activated and the Bluetooth® pairing function must be restarted.



**4/6:** A six-digit number code appears on the screen of the YpsoPump® and the arrows rotate. Enter this code on your Bluetooth® enabled device.

The identification code must be entered within 30 seconds. If the time is exceeded or a wrong identification code is entered, the warning “Bluetooth® connection failed” appears. Confirm the warning and repeat the procedure on page 134.



**5/6:** If Bluetooth® pairing was successful, the display automatically changes back to the status screen.



**6/6:** If you open the main menu again, tap the “Settings” icon, swipe to the left and tap the “Bluetooth® pairing” icon, the active connection is shown by the rotation of the arrows.



An active Bluetooth® connection to a Bluetooth® enabled device is indicated by rotating arrows. Only one Bluetooth® enabled device at a time can have an active connection with the YpsoPump®.



## 7.6 Preparing for storage

If you will not be using the YpsoPump® for a longer period, set your insulin pump into stop mode and remove the battery from the insulin pump to avoid any damage caused by a leaking battery. That puts the insulin pump in storage status. In the storage status the settings remain intact (basal rate, bolus increment, etc.).

After a restart all you have to do is perform the self-test and reset the time of day and date. After that, the insulin pump is in stop mode. A threaded rod return followed by priming has to be performed to put the insulin pump back into operation. Follow the procedure on page 31.



**When preparing your YpsoPump® for storage, remove the cartridge and the infusion set and dispose of the tubing and cannula base in a safety bin.**



**1/2:** Set the YpsoPump® to stop mode (see page 27). Remove the cartridge and the infusion set as described on page 95.



**2/2:** Open the battery compartment lid and remove the battery. Close the battery compartment lid and store the YpsoPump® in a safe place.

## 7.7 Internal rechargeable battery

The YpsoPump® has an internal rechargeable battery that is charged by the inserted alkaline battery. If the alkaline battery is removed, all functions still work. If the insulin pump is in run mode and a new battery is not inserted within 5 minutes, the “No battery” alarm is displayed. In stop mode the insulin pump is put in storage status 5 minutes after removal of the alkaline battery. If the alkaline battery is removed, the battery orientation screen appears:



To change the alkaline battery please follow the instructions on page 140.



If the internal rechargeable battery is subjected to a heavy load, it may run down. In this situation the “Charge internal rechargeable battery” alarm appears. The internal rechargeable battery is now charged by the inserted alkaline battery which is indicated by arrows rotating round the hourglass. The charging process can take up to 20 minutes. An alarm cancels any boluses in progress and any temporary basal rate function that is active.



## 7.8 Changing the battery



**1/5:** If the “Battery charge level low” warning appears, the insulin pump can still be operated for at least two days. Replace the battery as soon as possible.

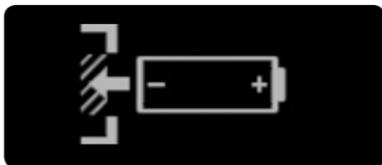


**2/5:** Open the battery compartment by inserting a coin in the groove of the battery compartment lid and turn counterclockwise. Remove the empty battery from the battery compartment and dispose of it in accordance with your national environmental protection regulations.



If the battery compartment has remained open for more than 5 minutes and the YpsoPump® is in run mode, an alarm is triggered. After inserting a new battery, all insulin pump settings are saved and do not have to be entered again.

If the battery compartment remains open for more than 5 minutes and the YpsoPump® is in stop mode, the insulin pump is automatically put into storage status. When changing the alkaline battery, make sure you do not lose the battery compartment lid.



**3/5:** The battery orientation screen shows the orientation of the AAA battery for insertion. It appears on the status screen. If the insulin pump is in run mode and the battery is not inserted for more than 5 minutes, an alarm is triggered.



**4/5:** Insert a new, size AAA, alkaline battery (LR03). Make sure the negative pole of the battery is inserted first. On the back of the insulin pump you will see a picture showing how to insert the battery. You can obtain replacement batteries from the usual battery sales outlets.



When changing the alkaline battery, check the battery compartment, the battery itself and the battery compartment lid for any damage. If you discover any damage (e.g. battery leak), contact Customer Service.



**5/5:** Lock the battery compartment by inserting a coin in the groove of the battery compartment lid and turning it clockwise until it stops. When the battery has been inserted, the mylife™ icon appears first, followed by the status screen or welcome screen. The latter appears if the battery has been removed during a threaded rod return or during a self-test after starting up from the storage status. Change the battery compartment lid every three months to minimize signs of wear.



If you remove the battery while you are in the main menu or in a submenu, all the current settings, which have not yet been confirmed, will be discarded and the battery orientation screen appears.

After removal of the battery the following functions are completed first before the battery orientation screen appears:

- Return of the threaded rod
- Priming in progress
- Standard bolus in progress
- Immediate portion of the combination bolus in progress
- Blind bolus in progress

If you remove the battery while any of the following functions are in progress, the battery orientation screen appears and the function continues in the background for 5 minutes until the alarm is triggered (alarms lead to a discontinuation of insulin delivery):

- Basal rate delivery
- Temporary basal rate function in progress
- Extended bolus in progress
- Extended portion of the combination bolus in progress

## 8 Troubleshooting

### Warnings

- ⚠ You may only use the self-filled 1.6-ml reservoir YpsoPump® Reservoir that is compatible with the YpsoPump®. Using a different cartridge which is not declared by the manufacturer to be compatible with YpsoPump® can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). In this case, change the cartridge.
- ⚠ Bear in mind that alarms triggered simultaneously are displayed in order of priority. If you have dealt with an alarm, it is possible that other alarms are still pending. Alarms that have not been dealt with can lead to failure of the preset insulin delivery, which can cause hyperglycemia (read warning in the box on page 7).
- ⚠ In loud surroundings it may be difficult to hear alarms (e.g. lawn mowing, concerts, etc.). In such surroundings listen for alarms and check your insulin pump screen more frequently. Alarms that have not been dealt with can lead to failure of the preset insulin delivery, which can cause hyperglycemia (read warning in the box on page 7).

- ⚠ At night it may not be possible to perceive alarms if the insulin pump is not positioned properly (e.g. if you are lying on the pump). Make sure the insulin pump is positioned properly while you are asleep so that you perceive any alarms. Alarms that have not been dealt with can lead to failure of the preset insulin delivery, which can cause hyperglycemia (read warning in the box on page 7).
- ⚠ Always make sure the infusion set is immediately disconnected from your body after an occlusion alarm in order to prevent insulin from being delivered to the body when the occlusion is suddenly eliminated. Not disconnecting the infusion set can lead to incorrect dosages of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7).

## 8.1 Incidents

<b>Air bubbles in the cartridge or in the infusion set</b>	Check your blood glucose level. Disconnect the infusion set from your body and prime the infusion set without any air bubbles in accordance with the procedure on page 99.
<b>“Basal rate profile A” icon is not available (shown in gray)</b>	If the temporary basal rate function is activated, the Basal rate profile A function is not available and it is not possible to change the basal rate profile.
<b>“Basal rate profile B” icon is not available (shown in gray)</b>	If the temporary basal rate function is activated, the Basal rate profile B function is not available and it is not possible to change the basal rate profile.
<b>Blind bolus function is not available</b>	Make sure the blind bolus function is activated and the insulin pump is in run mode. The blind bolus function is not available in stop mode. The blind bolus function cannot be performed if the cartridge is empty, nor if the remaining insulin amount in the cartridge or the bolus limit setting is smaller than the bolus increment setting. The blind bolus function cannot be performed either if a threaded rod return has been performed without any subsequent priming or if the priming function has not been completed properly.

<b>“Bluetooth® pairing” icon is not available (shown in gray)</b>	If the Bluetooth® function is not activated, the Bluetooth® pairing function cannot be activated.
<b>“Bolus” icon is not available (shown in gray)</b>	Make sure the YpsoPump® is in run mode as the bolus function is not available in stop mode. The bolus function cannot be performed if the cartridge is empty, nor if the remaining insulin amount in the cartridge or the bolus limit setting is smaller than the bolus increment setting. The bolus function cannot be performed either if a threaded rod return has been performed without any subsequent priming or if the priming function has not been completed properly.
<b>“Cartridge change” icon is not available (shown in gray)</b>	If the temporary basal rate function is activated and/or if an extended bolus or combination bolus is active, the cartridge change function is not available.
<b>“Combination bolus” icon is not available (shown in gray)</b>	The combination bolus function cannot be performed if the remaining insulin amount in the cartridge or the bolus limit setting is smaller than twice the bolus increment setting (minimum amount for combination bolus is twice the bolus increment).

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**Dirt in the cartridge compartment**

Set the insulin pump to stop mode. Disconnect the infusion set from your body. Remove the cartridge from the cartridge compartment. Remove the dirt (crumbs, grains of sand, particles of dust, etc.) from the cartridge compartment by tapping the insulin pump lightly on your palm (with the cartridge opening facing your palm). Never tap the insulin pump on a solid surface (table, kitchen worktop, washbasin, etc.). Clean the cartridge compartment with a damp cotton cloth. Then dry the cartridge compartment with a dry cotton cloth. If the insulin pump has not suffered any apparent damage, you can continue insulin pump therapy – otherwise contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

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**Dirt on the surface**

Clean the insulin pump with a damp cotton cloth. Then dry the surface with a dry cotton cloth. If it is not possible to remove the dirt, you can clean the surface with a small amount of normal cleaning liquid and a damp cotton cloth. Never use sharp objects (knife, screwdriver, steel wool, etc.), chemicals, solvents or strong detergents to clean the pump. If the dirt is stubborn, contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10. Please make sure you clean your insulin pump regularly.

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**Infusion set blocked (occlusion)**

Check your blood glucose level and disconnect the infusion set from your body. Eliminate the occlusion in accordance with the procedure on page 166.

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**Insulin in the cartridge compartment**

Check your blood glucose level. Set the insulin pump to stop mode. Disconnect the infusion set from your body. Remove the cartridge from the cartridge compartment and check it for cracks and damage. If necessary, replace the cartridge and clean the cartridge compartment with a damp cotton cloth. Then dry the cartridge compartment with a dry cotton cloth. If the insulin pump has not suffered any apparent damage, you can continue insulin pump therapy – otherwise contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

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**Insulin pump dropped**

Check your blood glucose level. Set the insulin pump to stop mode. Disconnect the infusion set from your body. Remove the cartridge and the infusion set and replace them. The insulin pump (as well as the cartridge) may contain undiscovered microcracks that are not visible to the human eye and might influence delivery accuracy. Check the exterior of the insulin pump for cracks and damage. Pay close attention to the self-test after the threaded rod has returned after a cartridge change. If the insulin pump has not suffered any apparent damage, you can continue insulin pump therapy. Always measure your blood glucose level regularly. If the insulin pump is damaged, contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

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**Most icons are not available (shown in gray)**

If the access lock function is activated, all therapy related functions are not available.

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<b>“Prime cannula” icon is not available (shown in gray)</b>	The tubing of the infusion set has not yet been primed.
<b>“Prime infusion set” icon is not available (shown in gray)</b>	If the temporary basal rate function is activated and/or if an extended bolus or combination bolus is active, the prime infusion set function is not available. The prime infusion set function cannot be executed if the cartridge is empty or if a previous threaded rod return has not yet been completed properly.
<b>“Switch basal rate profile” icon is not available (shown in gray)</b>	If the temporary basal rate function is activated, the switch basal rate profile function is not available.
<b>Water in the battery compartment</b>	Check your blood glucose level. Disconnect the infusion set from your body. Remove the battery from the battery compartment. Then dry the battery compartment with a dry cotton cloth. If the insulin pump has not suffered any apparent damage, you can continue insulin pump therapy – otherwise contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10.
<b>Water in the cartridge compartment</b>	Check your blood glucose level. Set the insulin pump to stop mode. Disconnect the infusion set from your body. Remove the cartridge from the cartridge compartment. Then dry the cartridge compartment with a dry cotton cloth. If the insulin pump has not suffered any apparent damage, you can continue insulin pump therapy – otherwise contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

## 8.2 Displayed warnings

The YpsoPump® has a safety system that constantly monitors all functions. If there is a deviation from the defined operating status, the insulin pump triggers a warning or an alarm, depending on the situation. You will find a description of the alarms on page 160. Displayed warnings are not saved in the alarm history.

All the displayed warnings are described on the following pages. The warnings are arranged in order of priority. This means:

- The “Cartridge level low” warning always appears with priority over all the warnings below if multiple events occur at the same time.
- The “Battery charge level low” warning always has priority over all the warnings below it, except if the “Cartridge level low” warning occurs at the same time.
- Unconfirmed alarms always appear with priority over warnings.

Displayed warnings are primarily tactile and audible and there are 4 escalation levels. The levels escalate at intervals of 30 minutes. The warnings appear on the status screen and have to be confirmed. For this purpose the screen can be switched on with the function button. The warnings do not cause any cancelation in insulin delivery. When all the warnings have been confirmed, the original status screen reappears.



### Escalation levels warnings:

**Level 1: Tactile**

**Level 2: Tactile and low audible signal**

**Level 3: Tactile and high audible signal**

**Level 4: Tactile and higher audible signal**

## Cartridge level low



The “Cartridge level low” warning is triggered if the programmed basal rate (including the temporary basal rate function) for the next 12 hours, together with the remaining amount of any bolus in progress, is greater than or equal to the remaining contents of the cartridge. Confirm by tapping  and change the cartridge as soon as possible in accordance with the procedure on page 95. The “Cartridge level low ” warning escalates to the “Cartridge empty” alarm if the cartridge is not changed in the meantime.

## Battery charge level low



If the “Battery charge level low” warning appears, the YpsoPump® can still be operated for at least two days. Confirm by tapping  and insert a new AAA alkaline battery (LR03) as soon as possible. Follow the procedure on page 140. Having confirmed the warning you will still see the low battery charge on your status screen. The “Battery charge level low” warning escalates to the “Battery empty” alarm if the battery is not changed in the meantime.

## Threaded rod return not completed



The “Threaded rod return not completed” warning appears if it has not yet been possible to perform the threaded rod return function properly. The warning can occur on account of dirt (sand, dried insulin, etc.) in the cartridge compartment or generally if the drive has a mechanical fault. This fault can also be triggered by touching the threaded rod with an object when the threaded rod is returning.

Confirm by tapping  and perform the threaded rod return function again. Make sure the cartridge is removed from the cartridge compartment first and that there is no dirt in the cartridge compartment – do not touch the threaded rod with objects. You will find further information about the threaded rod return function on page 95.

## Priming not completed

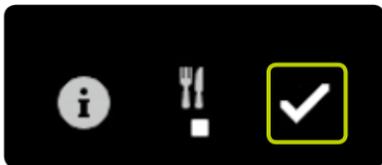


The “Priming not completed” warning appears if:

- the drive is fully extended (cartridge empty) without a plunger having been detected.
- the priming procedure is canceled by the user during plunger detection.
- the priming procedure is canceled by an alarm.
- the force on the plunger holder decreases during the priming procedure, for example because the cartridge has been removed or a wrong cartridge has been inserted.

Confirm by tapping  and perform the priming function again. Make sure the cartridge has been inserted properly and that the adapter is connected to the insulin pump properly. Follow the procedure on page 99.

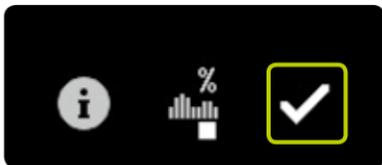
## Bolus canceled



The “Bolus canceled” warning appears if a bolus is canceled prematurely. Premature cancellation happens if there is an alarm or if the insulin pump is put into stop mode. Confirm by tapping .

If your bolus in progress is canceled prematurely, you can obtain the actual duration and the insulin amount delivered by referring to the therapy data or to the last bolus screen. If you wish to continue the bolus, you must reprogram it. Follow the procedure on page 57.

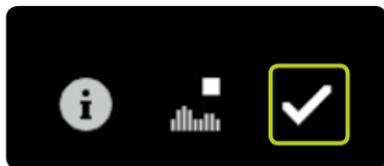
## Temporary basal rate function completed or canceled



The “Temporary basal rate function completed or canceled” warning appears if the temporary basal rate function has been completed or if it is canceled prematurely. Premature cancellation happens if there is an alarm or if the insulin pump is put into stop mode. Confirm by tapping .

If your temporary basal rate function is canceled prematurely, you can obtain the actual duration and the percentage setting by referring to the therapy data. If you wish to continue the temporary basal rate function, you must reprogram it. Follow the procedure on page 50.

## Insulin pump stopped



The “Insulin pump stopped” warning appears if the insulin pump has been in stop mode for more than one hour. Confirm by tapping . The warning now no longer appears unless the insulin pump is set to run mode again and then back to stop mode. To restart the insulin pump, follow the steps on page 25.



The screen of the Ypsopump® shows a stop warning if the insulin pump has been in stop mode for more than one hour. The stop warning can be triggered prematurely, after the insulin pump has been set in stop mode, by giving the function button a long press and then confirming.



## Bluetooth® connection failed



The “Bluetooth® connection failed” warning appears if:

- the 30-second time limit to enter the identification code is exceeded during the pairing process.
- a wrong identification code is entered during pairing process.
- an active Bluetooth® connection is accidentally disconnected.

Confirm by tapping . Do pair the insulin pump again to the required device in accordance with the procedure on page 134.

## 8.3 Alarms

The YpsoPump® has a safety system that constantly monitors all functions. If there is a deviation from the defined operating status, the insulin pump triggers an alarm, depending on the situation. You will find a description of the warnings on page 151. All the alarms are written to the alarm history, where they can be called up.

All the alarms are described on the following pages. The alarms are arranged in order of priority. This means:

- The “No battery” alarm always appears with priority over all the alarms below if multiple events occur at the same time.
- The “Battery empty” alarm always appears with priority over all the alarms below, but not if the “No battery” alarm occurs at the same time.
- Unconfirmed alarms always appear with priority over warnings.



**Alarms always lead to cancelation of insulin delivery.**

Alarms given are primarily tactile and audible and there are 4 escalation levels. The levels escalate at intervals of 5 minutes. If an alarm is confirmed but not dealt with, it is given again by audible and tactile means after 30 minutes. An electronic error is the exception. That is indicated directly and permanently by audible and tactile means.

Alarms that do not involve an electronic error appear on the status screen and have to be confirmed. To do so, the screen has to be switched on first using the function button. Alarms always lead to cancelation of insulin delivery. The alarm remains on the status screen until the actions to deal with the alarm have been performed on the pump. An electronic error is the exception. It is dealt with in accordance with the procedure on page 171.



**Escalation levels alarms:**

**Level 1: Tactile**

**Level 2: Tactile and low audible signal**

**Level 3: Tactile and high audible signal**

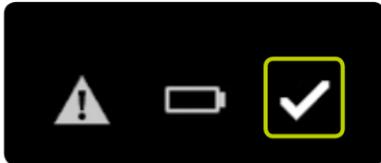
**Level 4: Tactile and higher audible signal**

## No battery



The “No battery” alarm appears if you remove the alkaline battery from the battery compartment for more than 5 minutes when the insulin pump is in run mode. Confirm by tapping  and insert a new AAA alkaline battery (LR03). Follow the procedure on page 140. The “No battery” alarm only appears if the battery was removed while the insulin pump was in run mode. If the battery is removed in stop mode, the insulin pump adopts storage status after 5 minutes.

## Battery empty



The “Battery empty” alarm appears if the battery no longer has sufficient power and has to be changed. Confirm by tapping  and insert a new AAA alkaline battery (LR03). Follow the procedure on page 140.

## Battery not suitable



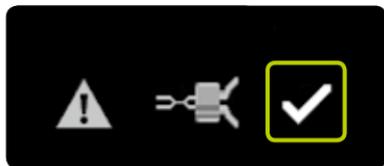
The “Battery not suitable” alarm appears if you insert a battery whose voltage is too high. Confirm by tapping . Remove the unsuitable battery from the battery compartment and insert a new AAA alkaline battery (LR03). Follow the procedure on page 140.

## Charge internal rechargeable battery



The “Charge internal rechargeable battery” alarm appears if the internal rechargeable battery of the YpsoPump® is depleted on account of a high load. All the insulin deliveries in progress are canceled: boluses, temporary basal rate and basal rate. Confirm by tapping . The internal rechargeable battery is now charged by the alkaline battery which is indicated by arrows rotating round the hourglass. The charging process can take up to 20 minutes. When you have confirmed the alarm, any canceled boluses and the canceled temporary basal rate function are indicated with appropriate warnings. Then the status screen is displayed, but not if the “Charge internal rechargeable battery” alarm has appeared after the threaded rod has returned or during a self-test after starting the insulin pump from storage status. In these cases the welcome screen appears.

## Occlusion



The “Occlusion” alarm appears if the infusion path is blocked (e.g. adapter, infusion set, cannula). Confirm by tapping  and disconnect the infusion set from your body. Then perform the following actions:

- Change the infusion set in accordance with the procedure on page 94.
- Prime the tubing with the priming volume specified for the tubing according to the instructions for use of your Ypsopump® Orbit® infusion set.
- If priming of the new infusion set can be completed without an occlusion alarm, therapy can be continued.
- If an occlusion alarm occurs again while the new infusion set is being primed, the cartridge must be changed in accordance with the procedure on page 95. If subsequent priming can be completed without an occlusion alarm, therapy can be continued.
- If an occlusion alarm occurs again while priming after having changed the cartridge, the insulin pump is faulty and Customer Service must be consulted. You find the contact details on the back of this User Guide as well as on page 10.

## No insulin



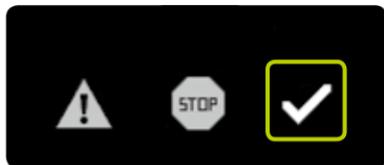
The “No insulin” alarm appears if after a threaded rod return no priming procedure is performed within 5 minutes or if the priming procedure failed. The “No insulin” alarm only appears if the insulin pump is in run mode. Confirm by tapping . Insert a cartridge and perform a priming procedure. Follow the procedure on page 95.

## Cartridge empty



The “Cartridge empty” alarm appears if the cartridge contains 0.0 U insulin. Confirm by tapping . Change the cartridge in accordance with the procedure on page 95.

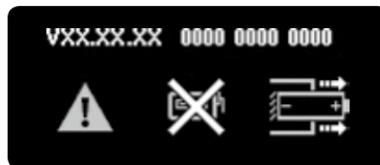
## Auto stop



The “Auto stop” alarm appears if the Ypsopump® is in run mode and has not been operated within 24 hours. Insulin delivery in progress is stopped. Confirm the alarm by tapping . After confirmation of the alarm the insulin delivery restarts.

## Electronic error

If the YpsoPump® detects an internal malfunction, an electronic error is displayed. All the functions of the insulin pump are canceled. In the event of an electronic error the insulin pump displays two different screens alternately which show you how to restart the insulin pump in a few steps.



Disconnect the infusion set from your body and remove the alkaline battery from the battery compartment.



Then press the function button for 2 seconds. The insulin pump is now devoid of a battery and in storage status. To put the insulin pump back into operation perform the steps on page 31 and check your therapy settings. Change the cartridge and the infusion set in accordance with the steps on page 94.



If the electronic error remains after the insulin pump has been put into operation again or if it reoccurs after a certain time, stop using the pump, remove the alkaline battery and contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10.

## 9 Everyday situations

### Warnings

- ⚠ Sport and physical activity can lead to a change in your insulin requirement, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). In case of doubt consult your doctor, diabetes advisor or Customer Service.
- ⚠ Make sure the infusion set does not become detached from your body during sport or physical activity. A detached infusion set can lead to incorrect dosage of insulin, which can cause hypoglycemia or hyperglycemia (read warning in the box on page 7). If the infusion set becomes detached, replace it with a new one.

## 9.1 General

- Always wear the YpsoPump® in your trouser pocket or use a carrying system offered by Ypsomed. Position the tubing in a way that strangulation is impossible, especially at night. Make sure the insulin pump is not subjected to any jolts, hard knocks or other mechanical interference. Make sure the insulin pump is not soiled (particles of dust, sand, etc.).
- The YpsoPump®, the infusion set and the connection point of the YpsoPump® must not come into contact with medical products or care products such as antiseptics, antibiotic creams, soaps, perfumes, deodorants, body lotions or any other cosmetics because this can discolor the YpsoPump® or cause the touchscreen to turn dull. Sweat and saliva cannot damage the YpsoPump®. However, there is a risk of damage to the insulin pump housing if the YpsoPump® comes into contact with other liquids or chemicals such as detergents, alcohol, beverages, oil or grease.
- Never expose the YpsoPump® and the infusion set to direct sources of light, radiation or heat (e.g. radiators, open fires). This also applies to the insulin you are using. Bear in mind that the operating temperature range of the YpsoPump® system is +5 °C to +37 °C. Keep the insulin pump away from condensing moisture (e.g. water atomiser, boiling water).
- Check your insulin pump periodically for cracks and damage. If you discover a (visual or audible) defect in your pump, contact Customer Service. You find the contact details on the back of this User Guide as well as on page 10. Never attempt to repair the insulin pump yourself.

## 9.2 Watertightness

- The YpsoPump® is IPX8 waterproof according to IEC 60529 (immersion to a depth of 1 m for up to 60 minutes). However, if the YpsoPump® has been dropped, it may no longer be waterproof due to undetected microcracks.
- Since the YpsoPump® Orbit® infusion set can be disconnected from your body, the YpsoPump® is easy to remove before taking a bath or shower or going swimming.
- Do not use the YpsoPump® in areas with very high humidity or temperature (e.g. sauna) or else it may be damaged. The system may be operated within a humidity range of 20% to 95% RH.

### 9.3 Traveling

- Consult your doctor or diabetes advisor to find out what preparations have to be made in order to travel with the YpsoPump®. Make sure you take sufficient supplies for your YpsoPump® and blood glucose meter with you on your journey. Make sure you will be able to continue your therapy in an emergency (insulin pen, glucose, etc.).
- If you will be traveling through different time zones, consult your doctor or diabetes advisor about how best to adapt your therapy to the changes in time of day.
- The YpsoPump® has only been tested for use at altitudes of up to 5500 meters above sea level. If you are traveling to a region that is higher than 5500 meters above sea level, you should stop the YpsoPump® and take it off.
- You do not have to switch off the YpsoPump® in aircraft with pressurized cabins, but you must disconnect the infusion set from your body for both take-off and landing.

## 9.4 Sources of interference

- The YpsoPump® meets the required standards for electromagnetic interference immunity. The functions of the YpsoPump® should not be affected by security systems at airports or anti-theft systems in department stores.
- However, malfunctions cannot be ruled out because numerous electrical appliances, e.g. mobile phones, emit electromagnetic waves. For this reason it is advisable to maintain a minimum distance of 25 cm between the YpsoPump® and such an electrical appliance.
- The YpsoPump® must not be used in the vicinity of electromagnetic fields of radar and antenna systems, high-voltage sources, X-ray sources, medical diagnostic imaging equipment, such as Magnetic Resonance Imaging (MRI), Computer Tomography (CT), Positron Emission Tomography (PET), or any other sources of heavy electric current. Such hazardous areas can cause the YpsoPump® to stop delivering insulin or damage the insulin pump.
- Examples of other hazardous areas are hyperbaric chambers and areas exposed to flammable gases or vapors. Before you enter such areas you must stop the YpsoPump® and take it off.
- Industry Canada Compliance Statement: This device complies with FCC Rules Part 15 and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- Canada Class B statement: This Class B digital apparatus complies with Canadian ICES-003.
- RF Exposure Requirements: This portable transmitter with its antenna complies FCC and IC RF exposure limits for general population/uncontrolled exposure.

## 9.5 Sport

- Consult your doctor or diabetes advisor to find out what preparations have to be made in order to do sports with the YpsoPump®. Make sure you take sufficient supplies for your YpsoPump® and blood glucose meter with you. Make sure you will be able to continue your therapy in an emergency (insulin pen, glucose, etc.).
- You may engage in sports which do not involve physical contact and hard knocks (e.g. jogging, power walking, cycling, etc.) using the YpsoPump®. If you do so, use the carrying system offered for the insulin pump so that you can wear the insulin pump safely and securely.
- Sports which involve physical contact and hard knocks (e.g. hockey, football, basketball, volleyball, etc.) can cause damage to the YpsoPump®. Extreme sports (e.g. parachuting, diving, amateur flying, etc.) must not be performed with the YpsoPump®. Heavy work (e.g. construction work, removal work, etc.) can also cause damage to your pump.
- YpsoPump® has a water protection classification IPX8 according to IEC 60529. Nevertheless, sports which involve water contact (e.g. swimming, aquafit, high diving, etc.) must not be performed with the YpsoPump®, as the watertightness of the insulin pump cannot be guaranteed in daily use under such circumstances. For water sports, disconnect the insulin pump from your body and measure your blood glucose regularly.

## 10 Annex

### 10.1 Product specifications

Insulin pump dimensions:	7.8 × 4.6 × 1.6 cm
Touchscreen dimensions:	4.1 × 1.6 cm
Weight:	83 g (including battery and filled cartridge)
Temperature range:	Operation: from +5 °C to +37 °C / Storage: from 0 °C to +40 °C
Humidity range:	Operation: 20 % to 95 % RH, non-condensing Storage: 20 % to 95 % RH, non-condensing
Air pressure range:	Operation: 500 hPa to 1060 hPa / Storage: 700 hPa to 1060 hPa
Battery:	1.5 V alkaline battery (LR03), size AAA
Service life of the battery:	Typically 30 days of average use (54 U/day; temperature 23 °C ± 2 °C) with activated Bluetooth® function
Duration of data storage:	360 (three hundred and sixty) months
Non-pyrogenic:	Liquid path only
Protection against electric shock:	Type BF applied part (IEC 60601-1), internally powered ME device
Alarm generation:	Audible, tactile and visual
Cartridge capacity:	1.6 ml (160 U)
Insulin concentration:	100 U/ml
Water protection classification:	IPX8 according to IEC 60529 (immersion to a depth of 1 m for up to 60 minutes)
Basal rate:	2 profiles (A and B), freely programmable by the user
Basal rate setting range:	0.00 U/h to 40.0 U/h. It is possible to set a basal rate limit between 40.0 U/h and 0.05 U/h in the same increments as the basal rate increments
Minimum basal rate greater than 0.00 U/h:	0.05 U/h

Basal rate increments:	Range 0.05 U/h to 1.00 U/h: increment 0.01 U/h Range 1.00 U/h to 2.00 U/h: increment 0.02 U/h Range 2.00 U/h to 15.0 U/h: increment 0.1 U/h Range 15.0 U/h to 40.0 U/h: increment 0.5 U/h
Bolus types:	Standard bolus, extended bolus, combination bolus and blind bolus
Minimum bolus:	0.1 U
Bolus setting range:	0.1 U to 30.0 U. It is possible to set a bolus limit between 30.0 U and 0.1 U in 0.1 U increments
Bolus increments:	0.1 U, 0.5 U, 1.0 U and 2.0 U
Basal rate accuracy at 0.05 U/h <sup>1</sup> :	+ 0 % to -24 % at 23 °C ± 2 °C
Basal rate accuracy from 0.30 U/h to 40.0 U/h:	± 5 % at 23 °C ± 2 °C
Bolus delivery accuracy for 0.1 U:	± 30 % at 23 °C ± 2 °C
Bolus delivery accuracy for 6.0 U:	± 5 % at 23 °C ± 2 °C
Bolus delivery accuracy for 30.0 U:	± 5 % at 23 °C ± 2 °C
Communication interface:	Bluetooth® 4.0 Low Energy 2400 to 2483.5 MHz
Occlusion alarm threshold:	≤ 3.0 bar
Maximum infusion pressure:	3.0 bar
Occlusion bolus volume at 1.00 U/h:	max. 5.0 U
Typical time until occlusion alarm at 1.00 U/h:	4 hours
Typical time until occlusion alarm at 0.05 U/h:	95 hours
Delivery rate during bolus delivery:	0.555 U/second
Max. delivery volume in the case of a single fault or a max. pressure drop of 550 mbar:	5.0 U

**1** At extreme environmental conditions, especially the combination of 40 °C, 500 mbar (corresponding to 5500 m above sea level) this accuracy may not be achieved. This very low basal rate will normally not be used even for 6 years old children. When planning to go to such extreme environments and using very small basal rates, please consult your doctor.

## 10.2 EMC safety distances according to Table 6 of IEC 60601-1-2

To provide the YpsoPump® with optimal protection against electromagnetic fields the following precautions concerning electromagnetic compatibility must be taken:

- The YpsoPump® must be put into operation in accordance with the instructions in this User Guide.
- Wireless communication devices such as wireless computer network devices (Wi-Fi), mobile phones, cordless telephones and their base stations, walkie-talkies, etc., can influence the YpsoPump® by emitting electromagnetic waves. The YpsoPump® should therefore be kept at sufficient distance from such devices.

Nominal power of the transmitter in watts	Safety distance in m		
	150 kHz to 800 MHz	800 MHz to 2.5 GHz	Mobile phones <sup>2</sup> 800 to 900 MHz and 1700 to 1990 MHz
0.01	0.04	0.07	0.03
0.1	0.11	0.22	0.08
1	0.35	0.70	0.25
2	0.49	0.99	0.35
10	1.11	2.21	0.79
100	3.50	7.00	2.50

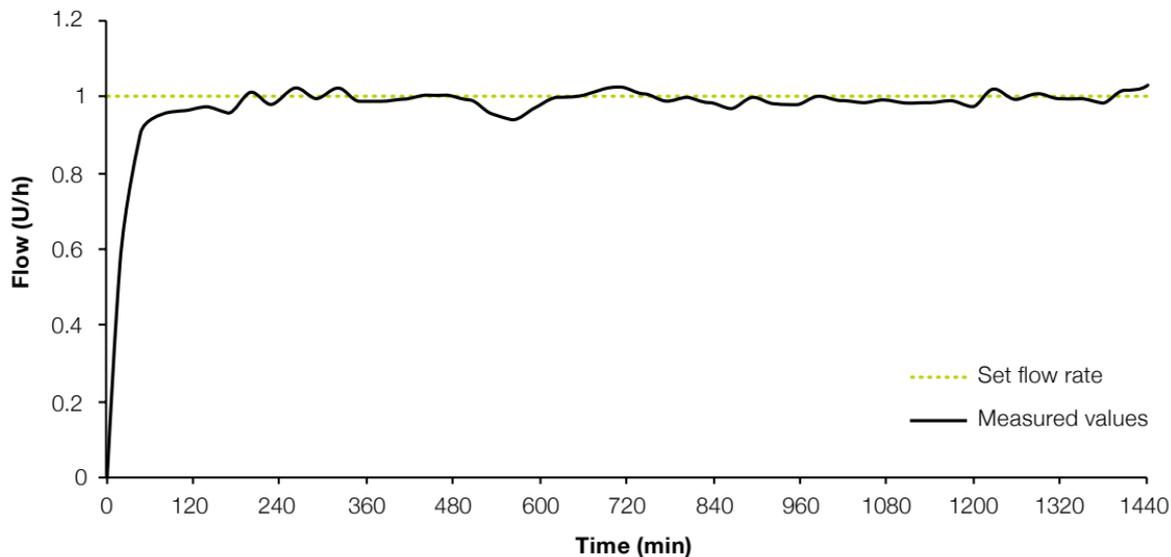
<sup>2</sup> Owing to the widespread use of mobile phones the interference immunity of the YpsoPump® was measured at those frequencies with a higher field strength (28 V/m).

**Examples:**

- A Wi-Fi router has a transmitting power of 0.1 W limited by law and it operates in the frequency range of 2400 MHz. According to the table that means a recommended safety distance of 22 cm.
- A DECT cordless telephone has a peak power of 0.25 W and it operates in the frequency range of 1880 to 1900 MHz. According to the table that means a recommended safety distance of approx. 13 cm.
- A mobile phone has a peak power of 2 W and it operates in the frequency range of 900 MHz (GSM900). According to the table that means a recommended safety distance of approx. 35 cm.
- A mobile phone has a peak power of 1 W and it operates in the frequency range of 1880 to 1900 MHz. According to the table that means a recommended safety distance of approx. 25 cm.

## 10.3 Delivery accuracy according to IEC 60601-2-24

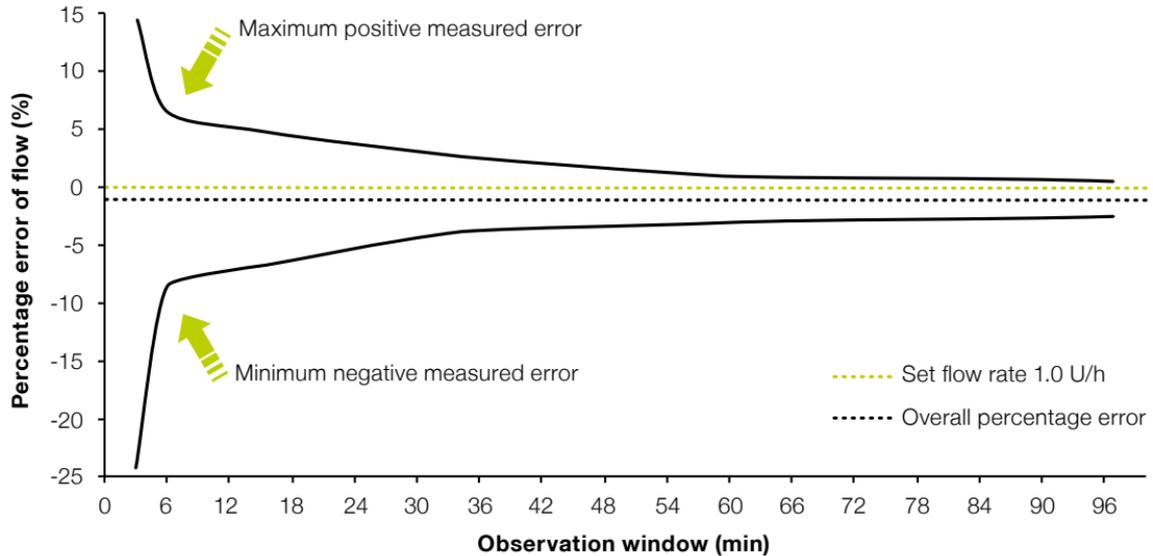
### Start-up graph



### Material and conditions

- YpsoPump® Orbit®soft, 110 cm tubing length
- Ambient conditions 22 °C ( $\pm 2$  °C), humidity uncontrolled (25 % to 75 %)

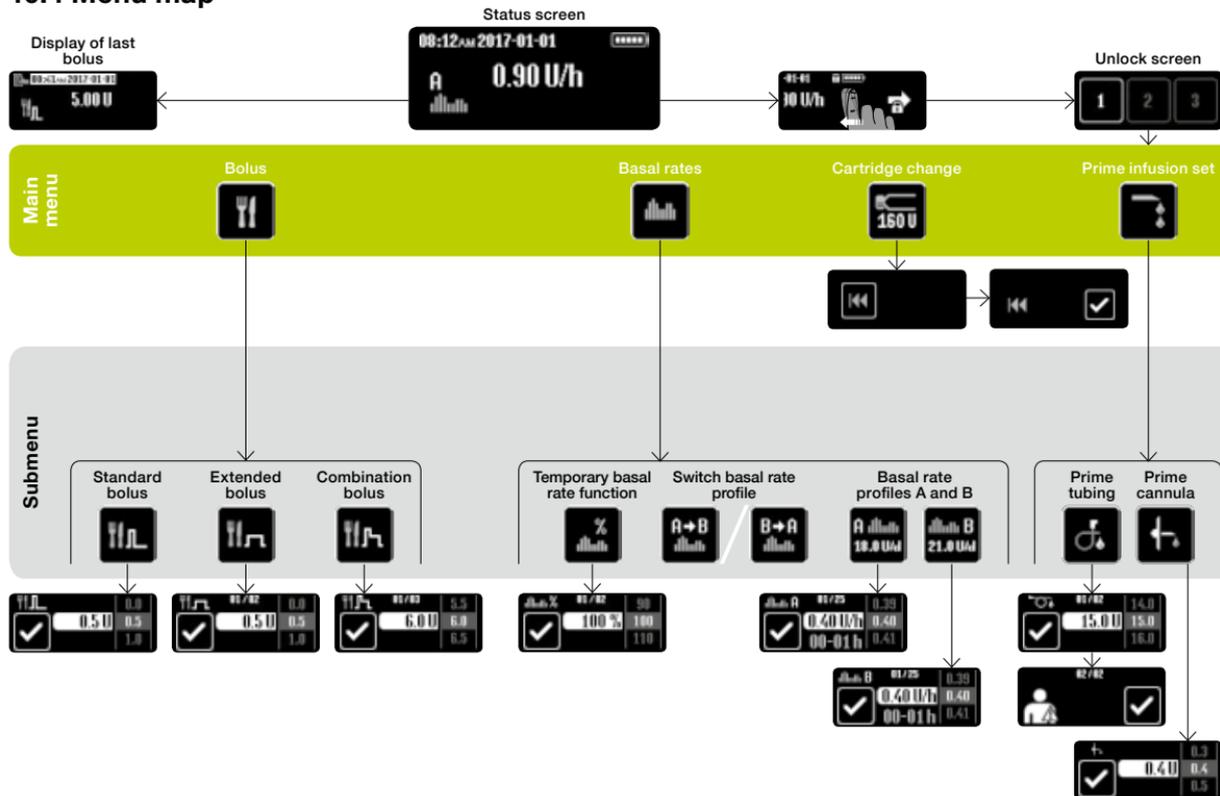
### Trumpet curve

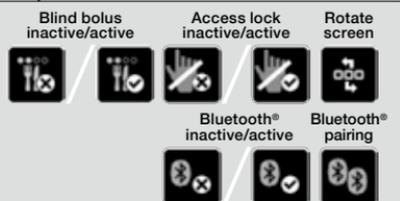
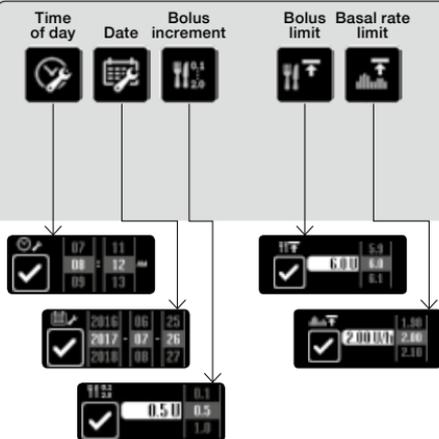
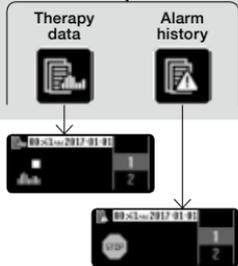
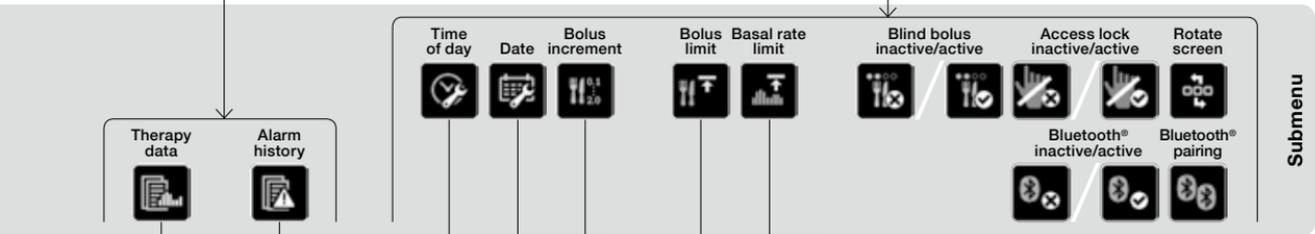
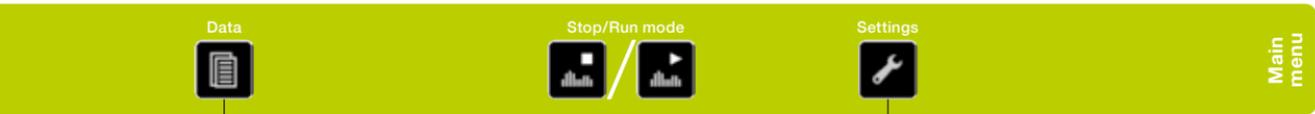


### Material and conditions

- YpsoPump® Orbit®soft, 110 cm tubing length
- Ambient conditions 22 °C ( $\pm 2$  °C), humidity uncontrolled (25 % to 75 %)

## 10.4 Menu map





## 10.5 Icon overview

### Navigation aids

---



Cancel



Confirm



Forward to unlock



Forward



One menu level up



One step back

---

### General icons

---



Warning



Alarm



Audible signal



Vibration signal



Battery charge level



Battery removed



Remove battery



Threaded rod returning

---



Prime tubing in progress



Prime cannula in progress



Disconnect infusion set from body



Ready for Bluetooth® pairing



Bluetooth® pairing in progress



Press function button for 2 seconds



Total insulin amount per day (basal and bolus)



Bolus



Standard bolus



Extended bolus



Combination bolus



Basal rates



Basal rate profile A



Basal rate profile B



Switch to basal rate profile A

### Icons in main menu and submenus



Switch to basal rate profile B



Temporary basal rate function



Temporary basal rate function activated/cancel



Cartridge change and current cartridge level



Return threaded rod



Prime infusion set



Prime tubing



Prime cannula



Data



Therapy data



Alarm history



Run mode/switch to stop mode



Stop mode/switch to run mode



Settings



Time of day



Date



Set bolus increment



Set bolus limit



Set basal rate limit



Blind bolus active/deactivate



Blind bolus inactive/activate



Access lock active/deactivate



Access lock inactive/activate



Rotate screen



Bluetooth® active/deactivate



Bluetooth® inactive/activate



Bluetooth® pairing

### Alarm icons



No battery



Battery empty



Battery not suitable



Charge internal rechargeable battery



Occlusion



No insulin



Cartridge empty



Auto stop



Electronic error

---

### Warning icons

---



Cartridge level low



Battery charge level low



Threaded rod return not completed



Priming not completed



Bolus canceled



Temporary basal rate function completed or canceled



Insulin pump stopped



Bluetooth® connection failed

---

## 10.6 Explanation of symbols

### YpsoPump® symbols

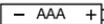
 Caution! Refer to accompanying document.

 Consult User Guide

**IPX8**  
IPX8 according to IEC 60529  
(immersion to a depth of 1 m for up to  
60 minutes)

 Applied part type BF according to  
IEC 60601-1 (protection against electric  
shock)

 Symbol for the separate collection of  
batteries/devices with a built-in battery

 1.5 V alkaline battery (LR03), size AAA and  
polarity

 Customer Service number

**IC-ID**  
Innovation, Science and Economic Development (ISED) Canada (formerly Industry  
Canada, IC) certification of radio frequency  
devices

 Device with built-in Bluetooth® technology  
The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc., and any use of such marks by Ypsomed AG is under license. Other trademarks and trade names are those of their respective owners.

 Device emits electromagnetic RF energy

 Manufacturer

 Catalog number

 Serial number

 Global trade item number

 Date of manufacture

 Begin use by

 Temperature limit

 Keep dry

 Keep away from sunlight

## YpsoPump® Orbit® and YpsoPump® Reservoir symbols

	The product was designed and manufactured in accordance with the relevant standards/directives and may be sold within the EU (European Union) and in EFTA countries.		Catalog number
	Consult the instructions for use		Batch code
	Restriction of sale and prescription by doctors of medicine (USA)		Global trade item number
	Sterilized using ethylene oxide		Date of manufacture
	Nonpyrogenic		Keep dry
	Do not reuse		Keep away from sunlight
	Manufacturer		Distributor
	Use by date		

## 10.7 Glossary

### **Adapter**

The adapter fixes the cartridge in place in the YpsoPump® and at the same time pierces the septum of the cartridge.

### **Basal rate**

The basal rate is a basic amount of insulin that is continuously administered subcutaneously in order to keep the blood glucose level within target range. The basal rate is determined according to your requirement together with your doctor and programmed accordingly in the YpsoPump®.

### **Basal rate limit**

The basal rate limit allows to define a maximal programmable hourly basal rate amount when programming the basal rate profiles.

### **Basal rate profile**

The YpsoPump® has 2 programmable basal rate profiles, A and B. A basal rate profile consists of 24 programmable hourly basal rates. Insulin delivery can thus be optimally adapted to your metabolism.

### **Blind bolus**

The blind bolus is a method of bolus delivery that can only be programmed and triggered by pressing the function button. This can be done without viewing the touchscreen.

### **Bolus**

A bolus is a programmed amount of insulin that is delivered in addition to the basal rate administered continuously (over a period of 24 hours). A bolus is used to correct an increased blood glucose level or to compensate for the carbohydrates in a meal.

**Bolus increment**

The bolus increment relates to all four bolus types. It indicates by how many units the bolus amount is increased/reduced when pressing the respective controls on the touchscreen/function button.

**Bolus limit**

The bolus limit allows to define a maximal programmable bolus amount when programming any bolus type.

**Cannula**

The cannula is located on the cannula base. It introduces the insulin to the subcutaneous tissue of the body.

**Cannula base**

The cannula base is an element of the YpsoPump® Orbit® infusion set. It consists of the cannula, the tape and the septum. It can be disconnected from the infusion set tubing and is located on the patient side of the infusion set.

**Cartridge**

The cartridge contains the insulin. The cartridge of the YpsoPump® has a capacity of 1.6 ml (160 U) insulin with a concentration of 100 U/ml.

**Combination bolus**

The combination bolus is a type of bolus in which the total bolus amount entered is split up between an immediate portion and an extended portion.

**Disconnectable infusion set**

The disconnectable infusion set makes it possible to remove the infusion set to take a shower or bath or do sports.

**Extended bolus**

An extended bolus is delivered by the YpsoPump® over the period of time you select.

**Icon**

Icons are graphic symbols on the touchscreen of the YpsoPump®. The entire control system of the YpsoPump® is based on language-independent icons.

**Infusion set**

The infusion set is the connection between the YpsoPump® and the patient's body.

**Infusion site**

An infusion site is the part of the body in which the infusion set is applied and the cannula is inserted through the skin.

**Insulin**

Insulin is a hormone that is made in the beta cells of the pancreas in healthy human beings. Insulin is a key hormone in carbohydrate metabolism.

**Internal rechargeable battery**

The YpsoPump® has an internal rechargeable battery that is charged by the inserted alkaline battery. If the alkaline battery is removed, all functions still work.

**Priming procedure**

The priming procedure is the procedure in which the infusion set is filled with insulin.

**Run mode**

In run mode, insulin is delivered according to the settings. Normally, all the functions of the YpsoPump® can be performed. All operable icons are active.

**Self-test**

The self-test is the procedure that is automatically performed when the device is put into operation for the first time and after every return of the threaded rod. The insulin pump tests the functions and the operability of the visual signal (screen), the vibration signal and the audible signal.

**Standard bolus**

The standard bolus is a type of bolus in which the bolus amount entered is delivered immediately.

### **Status screen**

The status screen indicates the current operating status of the YpsoPump® (current time of day, current date, battery charge, current function and current insulin delivery). To access the status screen the function button has to be given one short press.

### **Stop mode**

No insulin is delivered in stop mode. Certain functions (bolus delivery, temporary basal rate, switch basal rate profile) are inactive in stop mode. The relevant icons are displayed in gray and are disabled.

### **Swipe**

Swipe is the action taken on the screen of the YpsoPump® with which values are set. Set a value by swiping up or down with your finger until the required value is at the center of the screen. You can also tap the upper or lower value directly in order to increase or reduce it by one unit each time.

### **Temporary basal rate**

A temporary basal rate is set to reduce or increase the basal rate for a limited period of time. When a set temporary basal rate has finished, the programmed basal rate profile (A or B) continues.

**Threaded rod**

The threaded rod is a mechanical drive component of the YpsoPump® which pushes the plunger of the cartridge forward in order to deliver insulin.

**Threaded rod return**

Threaded rod return is the procedure in which the threaded rod of the YpsoPump® returns to the starting position so that a new cartridge can be inserted.

**Touchscreen**

Touchscreen means a screen that is sensitive to touch. The touchscreen of the YpsoPump® responds to touch and is controlled by tapping and swiping.

**100 U/ml**

100 U/ml indicates the concentration of the insulin. 100 units of insulin in every milliliter of liquid.

## 10.8 My pump settings

Basal rate profile A		Daily total _____ U/day
00:00 to 01:00 AM _____ U/h	00:00 to 01:00 PM _____ U/h	
01:00 to 02:00 AM _____ U/h	01:00 to 02:00 PM _____ U/h	
02:00 to 03:00 AM _____ U/h	02:00 to 03:00 PM _____ U/h	
03:00 to 04:00 AM _____ U/h	03:00 to 04:00 PM _____ U/h	
04:00 to 05:00 AM _____ U/h	04:00 to 05:00 PM _____ U/h	
05:00 to 06:00 AM _____ U/h	05:00 to 06:00 PM _____ U/h	
06:00 to 07:00 AM _____ U/h	06:00 to 07:00 PM _____ U/h	
07:00 to 08:00 AM _____ U/h	07:00 to 08:00 PM _____ U/h	
08:00 to 09:00 AM _____ U/h	08:00 to 09:00 PM _____ U/h	
09:00 to 10:00 AM _____ U/h	09:00 to 10:00 PM _____ U/h	
10:00 to 11:00 AM _____ U/h	10:00 to 11:00 PM _____ U/h	
11:00 to 12:00 AM _____ U/h	11:00 to 12:00 PM _____ U/h	

**Basal rate profile B**

Daily total \_\_\_\_\_ U/day

00:00 to 01:00 AM	_____ U/h	00:00 to 01:00 PM	_____ U/h
01:00 to 02:00 AM	_____ U/h	01:00 to 02:00 PM	_____ U/h
02:00 to 03:00 AM	_____ U/h	02:00 to 03:00 PM	_____ U/h
03:00 to 04:00 AM	_____ U/h	03:00 to 04:00 PM	_____ U/h
04:00 to 05:00 AM	_____ U/h	04:00 to 05:00 PM	_____ U/h
05:00 to 06:00 AM	_____ U/h	05:00 to 06:00 PM	_____ U/h
06:00 to 07:00 AM	_____ U/h	06:00 to 07:00 PM	_____ U/h
07:00 to 08:00 AM	_____ U/h	07:00 to 08:00 PM	_____ U/h
08:00 to 09:00 AM	_____ U/h	08:00 to 09:00 PM	_____ U/h
09:00 to 10:00 AM	_____ U/h	09:00 to 10:00 PM	_____ U/h
10:00 to 11:00 AM	_____ U/h	10:00 to 11:00 PM	_____ U/h
11:00 to 12:00 AM	_____ U/h	11:00 to 12:00 PM	_____ U/h

Temporary basal rate function	Value	Duration
e.g. soccer training	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours
_____	_____ percent	_____ hours







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