

# GoodKnight® 420G



## Patient Manual

## List of Patient Manual revisions

# GoodKnight<sup>®</sup> 420G

The pages below are included in the American version of the *GoodKnight*<sup>®</sup> 420G patient manual  
Ref. M-139DFU02-10 revision C.

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Reference or revision	Description	Date
M-139DFU02-10 revision A.	Creation of the manual	February 2002
Revision B.	Modification of the manual (sections “Installing a humidifier” and “Electrical characteristics of the power supply module”)	October 2003
Revision C.	Modification of the manual (Implementation of the CE-mark in the section “Symbols” and Nellcor Puritan Bennett trademark)	July 2005

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# PURITAN BENNETT tyco Healthcare

The Puritan Bennett **GoodKnight<sup>®</sup> 420G** device (GK420G) is intended for treating patients with Sleep Disordered Breathing including Obstructive Sleep Apnea Syndrome (OSAS). The main characteristic of this pathology is the occurrence of multiple respiratory events caused by contraction of the upper airways that disturb sleep. The *GoodKnight* 420G delivers a Continuous Positive Airway Pressure (CPAP) that prevents the upper airways from becoming obstructed thus eliminating apneas.

It is essential for you to understand the limitations on the use of this device. Therefore, please read this manual carefully before using the *GoodKnight* 420G.

The information contained here is intended to help you use this device under optimum conditions of safety and operation. For any question relating to the equipment and its use, contact your Health Care Provider or your home Medical Equipment Provider.

Your doctor has decided on the treatment of your illness. He or she has prescribed the various parameters that the hospital or your home care provider will program. You must not make any adjustment, except under direct supervision of your Home Care Provider.

## CAUTION

Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.

**GoodKnight<sup>®</sup>** is a registered trademark of Nellcor Puritan Bennett Inc.

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## **BEFORE STARTING**

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### **Safety instructions**

In order to ensure that you use your *GoodKnight 420G* device safely and efficiently, please read all the information contained in this operating manual. Please pay special attention to the passages preceded by the following terms:

**WARNING**

Means that there is a danger of death or accident to you or others.

**CAUTION**

Means that there is a possibility of material damage to this or another device.

**NOTE**

Indicates special points aimed at more efficient and practical operation.

**WARNINGS**

1. Before any use, please check your *GoodKnight 420G*, as specified in the chapter “Checking the components”. (See page 3).
2. In the event of additional oxygen supply, carefully observe the safety instructions for using oxygen given in the chapter “Fitting an oxygen adaptor”. (See page 8).
3. Only use the accessories that have been given to you by your service provider. Check that you have the instructions for using each of the accessories and read through them.
4. Use only the specific power supply module provided with the device.
5. Do not use the device in the presence of flammable fumes.
6. Follow the device’s installation instructions as specified in this manual in the chapter “Installation”. (See page 5). In particular, keep the machine away from any sources of water.
7. Do not accidentally or intentionally obstruct the air outlet or any other opening in the device or the respiratory circuit.
8. Do not introduce liquids or objects into the air outlet.
9. You may contact the medical team if, when using the *GoodKnight 420G*, the following symptoms appear: dryness in your airways or nose, skin sensitivity, runny nose, earache, sinus trouble, daytime drowsiness, mood changes, disorientation, irritability or memory loss.
10. Contact your home care provider in the event of any malfunction, whatever it may be. Maintaining this equipment is solely the responsibility of the competent personnel. Do not attempt to open the device.
11. The air flow for breathing produced by this device can be as much as 7°F higher than the temperature of the room. Caution should be exercised if the room temperature is warmer than 90°F.

## Indications for use

The *GoodKnight 420G* device is indicated for use in the treatment of obstructive respiratory sleep disorders, particularly Obstructive Sleep Apnea (OSA) in spontaneously breathing patients weighing over 30 kg (66 lb) within a homecare environment.

## Precautions for use

The *GoodKnight 420G* device must be used with caution with patients in the following conditions. If you are affected by one of these, contact your doctor at the start of your treatment.

- Pneumothorax or pneumomediastinum
- Severe bullous emphysema or previously complicated by pneumothorax
- Massive epistaxis or previous massive epistaxis
- Decompensated cardiac insufficiency or hypotension, especially in case of depletion in blood volume or in case of cardiac rhythm disorder
- Pneumoencephalus, traumatism or recent surgery with the after-effect of a cranio-nasopharyngeal fistula
- Acute sinusitis, otitis media or perforation of the tympanic membrane
- Severe claustrophobia.



## Checking the components

In order to be able to use the *GoodKnight 420G* with its specific electrical power supply, you must have at least the following items:

- A patient tubing.
- A nasal mask (often called an “interface”) with all its fastening accessories as specified in the instructions for using this mask.

In addition to these accessories, your doctor could have prescribed the use of a humidifier. In this case, check that you have all the accessories for this humidifier specified in its operating instructions.

In the case of an additional oxygen supply, you must also have an adaptor (only in the case where the oxygen supply is not fitted directly onto the mask). See the chapter “Fitting an oxygen adaptor”. (See page 8).

Carefully check the device and each accessory. Check especially that the hoses are not damaged and that the mask does not have any cracks or distortion in the mask housing or seal (part of the mask coming in contact with the face).

Carefully check the device and the specific power supply module and verify that there is no obvious fault. Plug the device to the mains using its power supply module, referring to steps 4 and 5 of the chapter “Standard installation”. (See page 7).

The type of the device is displayed for a few seconds then the following standby screen showing the hour (the value displayed is given as example):

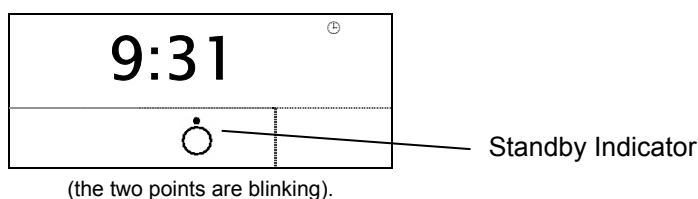


Figure 1 – View of the display when the device is in standby mode

If the device was disconnected while the motor was running, the screen displays the pressure. The device shows the same adjustments as at the time of the power supply cord disconnection and is set on the pressure used at the time of disconnection.

Start the device by pressing the **ON/OFF** button. (See reference 4 in Figure 2, page 5). The blower should start up and the noise should be regular.

Stop the device by pressing the **ON/OFF** button and unplug the power supply lead from the mains.

### WARNING

**In the event of problems or if you discover any anomaly, do not start the treatment and contact your home service provider.**

## ***DESCRIPTION OF THE DEVICE***

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The **GoodKnight 420G** is powered from an external power supply and equipped with specific accessories. The device is described below.

See figures 2, 3 and 4 on page 5.

### **1. Display**

Allows you to visualise different information such as the pressure delivered, the settings of the device or the hour. For further information, refer to the chapter “Accessing information on the device”. (See page 14).

### **2. Information Access button**

Used for accessing the different information regarding the device. For further details, refer to the chapter “Accessing information on the device”. (See page 14).

### **3. Ramp button**

Used for starting or stopping the pressure increase ramp (for further information, refer to the chapter “Using the ramp”. (See page 12). It is also used to decrease the value of the parameters during the device settings.

### **4. ON/OFF button**

Used for turning the device on or off. It is also used to increase the value of the parameters during the device settings.

### **5. Outlet connector**

This is the air outlet onto which the hose is connected. For further information, refer to the chapter “Installation”. (See page 7).

### **6. Supply connector**

Used for powering the device from the specific power supply module or from an external battery. For further information, refer to the chapter “Installing”. (See page 10).

### **7. Air inlet filters**

These filters prevent dust from entering the device and the air flow. For additional information, refer to the chapter “Maintenance and cleaning instructions” (See page 17).

The items in the Figures below are described on page 4.

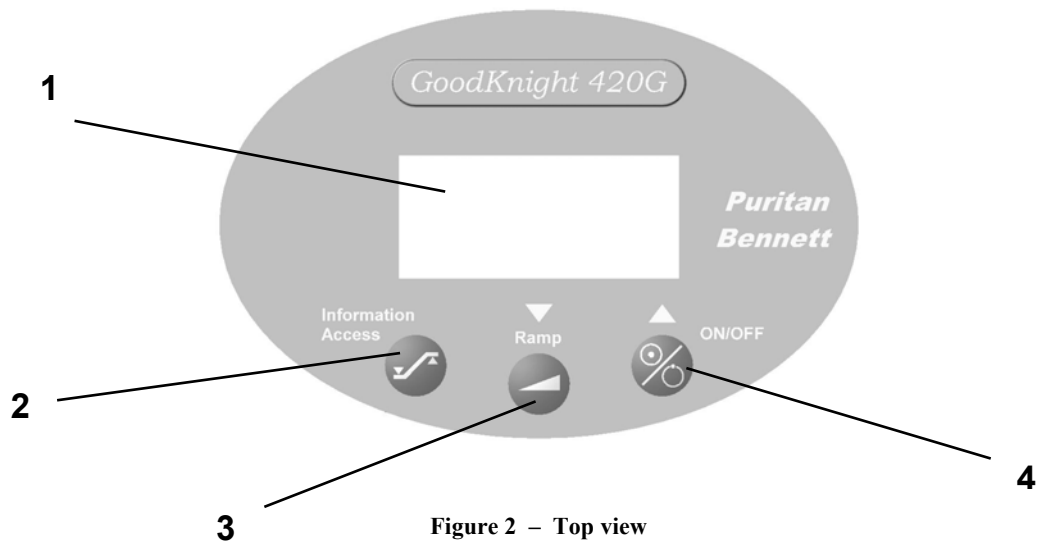


Figure 3 – General view



Figure 4 – Rear view

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## INSTALLATION

This chapter shows you how to connect the various accessories and cables to your device. Before beginning the installation, please check your device and its accessories, by referring to the chapter on “Checking the components”. (See page 3).

### CAUTION

**In general, place the device on a stable surface. Avoid placing it too near a wall or any other obstacle which could hamper the intake of air into the device.**

### Standard installation

1. Connect the patient tubing to the device. To do this, connect the hose onto the outlet connector of the device. (See reference 5 in Figure 3, page 5).

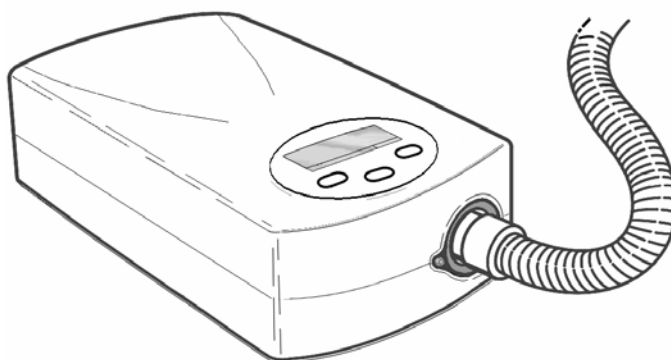


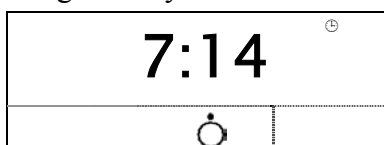
Figure 5 – Connection of the patient tubing to the device

2. Prepare the mask as described in its instructions for use.
3. Connect the mask to the patient tubing free end.
4. Connect the cable of the power supply module to the supply connector located on the back of the device. (See reference 6 in Figure 4, page 5).

### CAUTION

**Use only the specific power supply module provided with the device.**

5. Connect the plug of the power supply module to the mains. The type of the device is displayed for a few seconds then the following standby screen indicating the hours and the minutes :



The two points are blinking.

6. The device is ready to operate. Please refer now to the chapter “Use”. (See page 11).

## Fitting an oxygen adaptor

Substitute the following step for step 1 of the standard installation procedure:

- Connect the oxygen adaptor onto the device's outlet connector and connect the other end of the adaptor onto the nozzle of the patient tubing.

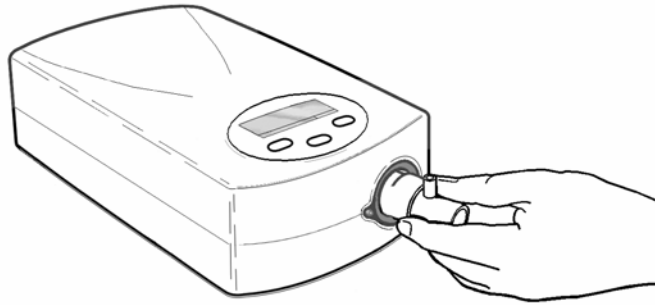


Figure 6 – Connecting the oxygen adaptor to the device

You can then repeat steps 2 to 6 of the standard installation to continue installing the equipment.

### WARNINGS

- Always follow the instructions of the medical team or home care provider in the event of using oxygen.
- Do not smoke in the presence of oxygen.
- Do not inject oxygen through the air inlet of the device.
- Carefully follow the start-of-treatment and end-of-treatment steps described in the chapter on “Use” on page 11.
- If supplemental oxygen is being used, the oxygen flow must be turned off when the device is not operating. When the device is not in operation, and the oxygen flow is left on, oxygen delivered into the mask circuit may accumulate within the device enclosure. Oxygen accumulated in the device enclosure will create a risk of fire. This warning applies to most types of CPAP devices.

### CAUTION

At a fixed flow rate of supplemental oxygen flow, the inhaled oxygen concentration will vary, depending on the pressure settings, patient breathing pattern, mask selection, and the leak rate. This caution applies to most types of CPAP devices.

## Installing a humidifier

Please refer to the humidifier user instructions for your for further information on its preparation and safety precautions.

### WARNING

The humidifier must be filled before being connected to the device.

### CAUTION

In order to avoid water damage, make sure that the humidifier is always placed lower than the GoodKnight 420G unit.

Substitute the steps below for step 1 of the standard installation procedure:

1. Connect one end of the short spiral hose onto the outlet connector of the device. (See reference 5 in Figure 3, page 5).
2. Connect the other end of the short humidifier connection tubing onto one of the humidifier's connectors.

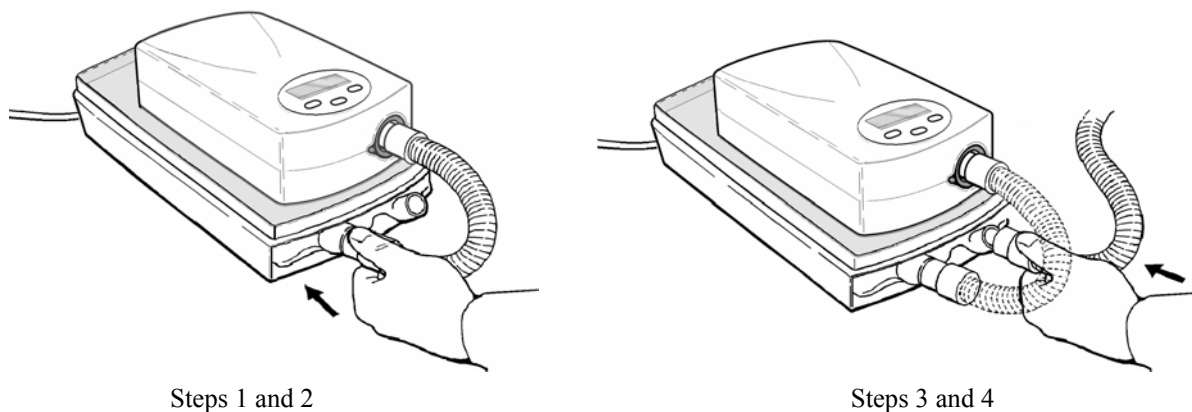


Figure 7 – Connecting the humidifier to the device

3. Connect the end of the patient tubing onto the humidifier's second connector.

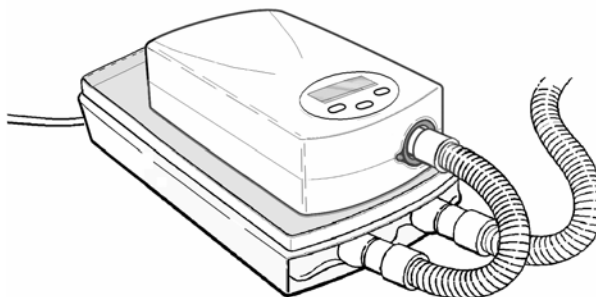


Figure 8 – View of the humidifier connected to the device

You can then resume with steps 2 to 6 of the standard installation to continue installing the equipment.

## Installing an external battery

The *GoodKnight 420G* can be powered by a 12-Volt car battery by using a special cable provided for this purpose. The device can be used for 8 hours at least with a fully charged car battery in normal operation conditions.

### CAUTION

- **Do not use any battery power cable other than the optional battery cable specific to the *GoodKnight 420G*. There is a risk of damaging the device and your battery.**
- **Only use 12-Volt DC sources and make the proper polarity connections (+ and -).**

To install the battery cable, substitute the following steps for steps 4 and 5 of the standard installation procedure:

1. Connect the battery power cable onto the supply connector at the back of the device. (See reference 6 in Figure 4, page 5).
2. Connect the other end of the cable directly onto the battery.

### NOTE

**Before using the battery, always be sure it is fully charged.**

The *GoodKnight 420G* can be powered through a vehicle cigarette lighter by using the cable provided for this purpose.

To do so, replace steps 4 and 5 of the standard installation by the following steps:

1. Connect the battery power cable onto the supply connector at the back of the device. (See reference 6 in Figure 4, page 5).
2. Connect the other end of the cable directly onto the cigarette lighter-plug.



## USE

This chapter shows you how to use the device after installing it as described in the previous chapter. It also shows you how to use the pressure increase (ramp) function and how to access information on settings (you will not be able to alter these settings, but only view them).

### WARNING

In the sections “Starting treatment” and “Stopping treatment” below, please follow the directions carefully. If these directions are not followed, an accident can occur, especially where the use of oxygen is concerned.

## Starting treatment

Once the device has been installed in accordance with the instructions given in the previous chapter, please follow the instructions below to start treatment:

1. Start the device by pressing the **ON/OFF** button.

The display shows the pressure available as well as the operation and compliance indicators (see Figure 9).

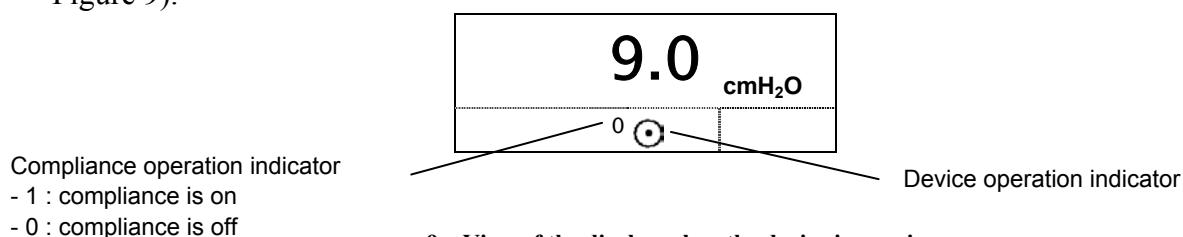


Figure 9 – View of the display when the device is running

### NOTES

- The pressure unit displayed (hPa or cmH<sub>2</sub>O) can be modified by the Practitioner.
  - The compliance operation indicator is displayed only after 15 minutes operation of the device.
2. Put the nasal mask in place according to the instructions for its use. If a mask with exhalation vent is used, it includes a hole by which the exhaled gases will be flushed and could not be rebreathed. If a mask without exhalation vent is used, your doctor must provide you with an adaptor allowing gases flushing as close as possible to the nose. **Breathe normally.**

### WARNING

A CPAP mask with hose should not be worn unless the CPAP device is turned on and operating properly. The vent hole(s) associated with the mask should never be blocked. This CPAP machine is intended to be used with masks (or connectors) that have vent holes to allow continuous flow of air out of the mask. When the CPAP device is turned on and functioning properly, new air from the CPAP machine flushes the exhaled air out through the mask vent hole. However, when the CPAP device is not operating, enough fresh air will not be provided through the mask, and exhaled air may be rebreathed. Rebreathing of exhaled air for longer than several minutes can in some circumstances lead to rebreathing CO<sub>2</sub> or possible suffocation. This warning applies to most models of CPAP devices.

3. If you are using a heated humidifier, turn it on according to instructions for use.
4. If you are using oxygen, open the flow now.

**WARNINGS**

- When the device is in operation mode, check that it delivers an airflow. If no airflow is felt, turn off the device and contact the service provider.
- At lower CPAP pressures, the flow through the exhalation port may be inadequate to clear all exhaled gas from the hose. Some rebreathing may occur.

**Stopping treatment**

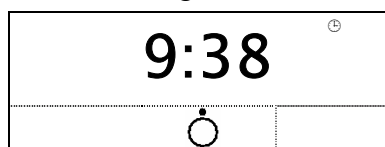
When the *GoodKnight 420G* is operating, follow the instructions below to discontinue the treatment:

1. If you are using oxygen, stop the flow now.
2. Remove the interface (nasal mask).
3. If you are using a heated humidifier, turn it off according to the instructions for use. Disconnect the humidifier from the unit.

**CAUTION**

**Do not leave the humidifier connected to the unit or to the tubing when the humidifier is not in use, as humidity could enter the device and degrade device performance.**

4. Turn the device off by pressing the **ON/OFF** button. The device will return to standby mode and display the following standby screen showing the time:

**CAUTION**

**Check that no humidity appears in the tubing. If so, let the tubing dry before you use it again.**

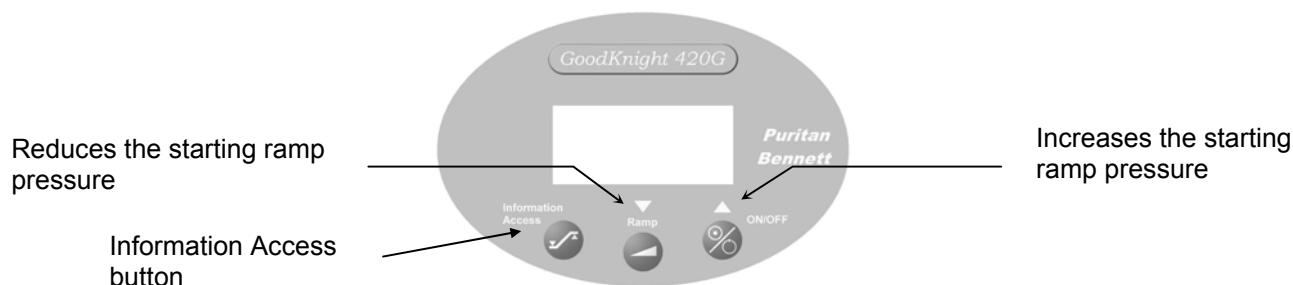
**Using the ramp**

First of all adjust the starting ramp pressure of your *GoodKnight 420G* device by observing the following instructions:

**NOTE**

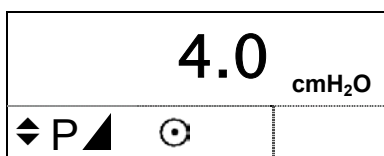
**If the ramp time is set to zero, this adjustment is not accessible.**

The initial ramp pressure can be set to a value between 4 cmH<sub>2</sub>O and the pressure level prescribed by your doctor. This function allows you to set the appropriate pressure level to enable you to fall asleep. To access the parameter setting menu, just press for a second the **Information Access** button, whether the device is on standby or in operation. (See Figure 10).



**Figure 10 – View of the control buttons**

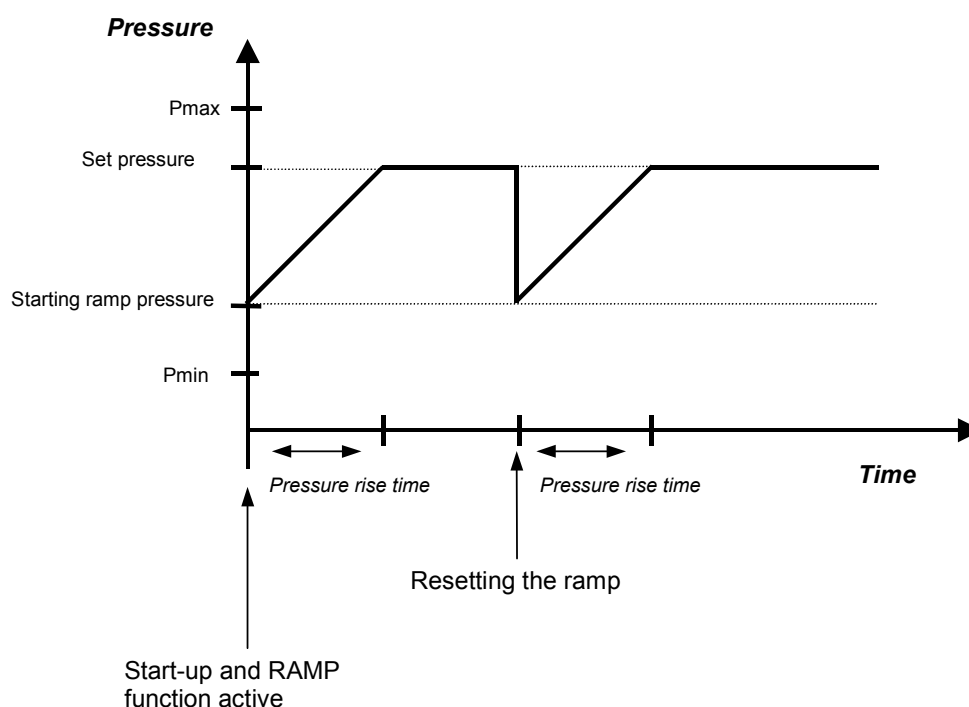
You have to press this button the number of times required for displaying the screen below:



The pressure value can then be changed by using the **ON/OFF** and **Ramp** keys.

The ramp function enables you to make the rise in pressure progressive. Thus, the pressure level is low at the start of the night to help you to fall asleep. You can also use this function if you have to get up during the night and have difficulty going back to sleep. The pressure rise time up to the final pressure is prescribed by your medical team and the setting carried out by your service provider is between 0 (no progressive rise) and 30 minutes in 5-minute increments. The ramp may have been preset to 0 according to your medical team's prescription. In this case, the ramp function is disabled and pressing the Ramp button on the front panel of the device has no effect. (Refer to reference 3 in Figure 2, page 5).

1. To start the ramp, just press the Ramp button when the device is on. The pressure will fall to a lower value, as previously described, then increase progressively up to the prescribed pressure level, so as not to wake you. The device will run normally, delivering a treatment pressure throughout the night unless you press the Ramp button again.
2. To end the ramp, press the Ramp button again and the function will be disabled. To reset the ramp, press the ramp function again (the ramp indicator lights up when this is activated).



**Figure 11 – Changes in pressure over time  
when activating the ramp function**

## Accessing information on the device

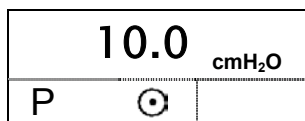
The display enables you to view the different information on the settings of the *GoodKnight 420G*. (Refer to reference 1 in Figure 2, page 5).

The setting information is accessible whether the device is on standby or in operation. For this, just press the **Information Access** button for one second. (See reference 2 in Figure 2, page 5). With each additional key press, you access further data.

### NOTE

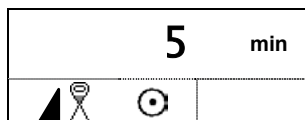
In the following screens, the device is shown in operation mode and all the values are given as a guide only.

Press for one second on Information Access button



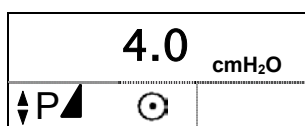
- **The pressure level** set by the doctor (equivalent to the prescribed pressure when the device is running).

Press Information Access button



- **The ramp time** set by the doctor (period of time over which the pressure gradually increases from the starting ramp pressure to the pressure level).

Press Information Access button



- **The starting ramp pressure** (pressure level at the beginning of ramp); this parameter is adjustable and visible only if the ramp time is other than 0.

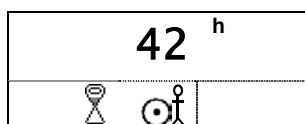
The symbol  $\updownarrow$  used shows that the parameter is adjustable. You can increase or reduce the value displayed by using the ON/OFF or Ramp keys. For further details, refer to the chapter “Using the ramp”. (See page 12).

Press Information Access button



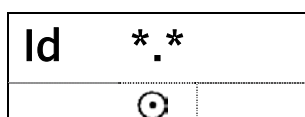
- **The hour meter value** (device operating time).

Press Information Access button



- **The compliance meter value** (time during which the patient has breathed with the device).

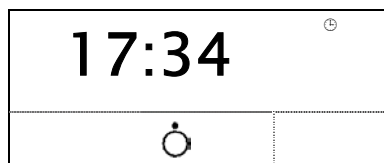
Press Information Access button



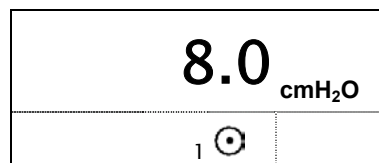
- **The *GoodKnight 420G* on-board software version.**

Press the **Information Access** button again to exit the parameter setting menu.

In this case, the display again shows one of the following two screens indicating the status of your device (the values are given as examples).



The device is on standby.



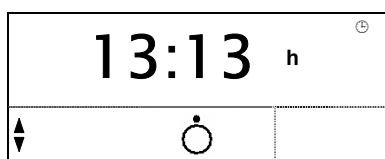
The device is running.

#### NOTE

Exit from the parameter setting menu takes place automatically when you do not press any key for 30 seconds.

## Setting the time

You can set the time only when the device is on standby. To do so, just press the **Ramp** button for one second. (See reference 3 in Figure 2, page 5). Then while continuing to hold the **Ramp** button down, press the **ON/OFF** button. (See reference 4 in Figure 2, page 5). If you release the pressure on the buttons, the symbol of adjustment  $\updownarrow$  appears under the hour, as shown on the screen hereafter:



#### NOTE

**The time will only be displayed in a 24-hour format. Thus, 13:13 represents 1:13 P.M.**

The letter h indicating the hour blinks, you can then set it using the **Ramp** and **ON/OFF** keys.

To set the minutes, just press the **Information Access** button, the symbol of minutes blinks in its turn and you can set them by following the same procedure as for the hour.

Press the **Information Access** button again to exit the menu.

#### NOTE

Exit from the parameter setting menu takes place automatically when you do not press any key for 30 seconds.

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## **MAINTENANCE AND CLEANING INSTRUCTIONS**

---

In order to ensure that you use your *GoodKnight 420G*, safely and efficiently, please observe the maintenance instructions specified below.

### **GoodKnight 420G**

The hard plastic case protecting the internal components of the device does not require any special maintenance. When it proves necessary, clean the device using a soft cloth dampened with warm soapy water. Dry the device thoroughly.

#### **WARNINGS**

- Always unplug the device before cleaning it.
- Do not use a spray cleaner. This is because residues may lodge in the air outlet, the foam filter or inside the device. This could cause irritation of the airways due to chemical residues.
- Do not submerge the device in water.
- Do not allow water to run onto the device, or drip into any of its openings.
- Never use the device without verifying that the filter has been installed.

### **Air inlet filters**

Change the filters as soon as they become torn or dirty. (See reference 7 in Figure 4, page 5).

Clean the outer foam filter at least once a week, or more often if necessary, in the following way:

1. Wash the filter with warm soapy water.
2. Rinse thoroughly so as to remove all traces of soap.
3. Dry it by pressing it sandwiched in a absorbant towel.
4. Leave it to dry completely before replacing it.
5. Replace the filter at the back of the device.

The high-efficiency white fabric filter (this optional filter is available separately) cannot be washed, it must be changed at least once a month, or more often if it is visibly clogged.

#### **WARNING**

Never use the *GoodKnight 420G* without an air inlet filter.

### **Hose**

Please refer to the instructions for use that were sent to you with the hose.

## **Nasal mask**

Please refer to the instructions for use that were sent to you with your nasal mask.

## **Humidifier**

Please refer to the instructions for use that were sent to you with your humidifier.

## **Oxygen adaptor**

Please refer to the instructions for use that were sent to you with the oxygen adaptor.



## TROUBLE-SHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTION
Discomfort due to a feeling of the pressure being too high.	Pressure of the <i>GoodKnight 420G</i> .	Adapting to the nasal pressure takes a while. Try to use the pressure increase ramp when you go to sleep (see the chapter « Using the ramp » page 12). Relax and breathe slowly through your nose with your mouth closed. If the pressure is not suitable for you, contact your home care provider.
The device is not delivering the correct pressure (display).	The ramp is activated.	Check whether the ramp indicator is displayed. Press the Ramp button to cancel the function. (See reference 3 in Figure 2, page 5).
The device is delivering air that is too hot.	The air inlet filters may be dirty. The air inlet is clogged.  The room temperature is too high.	Clean or replace the filters as the case may be (refer to the chapter on « Maintenance and cleaning instructions » on page 17). Move any linen, bedding or clothing away from the <i>GK420G</i> . Do not block the air intake of your <i>GK420G</i> .  Lower the thermostat for the room. Make sure that the <i>GK420G</i> is away from any heat source. Remove the hose from under the blankets.
Dry or irritated nose or throat.	The air is too dry.	Humidify the air in the room using a humidifier. Contact your Home Care Provider to obtain a humidifier for your CPAP.
Cold nose.	The room temperature is too low.	Increase the temperature of the room or place the hose under the blankets to reduce heat loss.
Pains in your nose, sinuses or ears.	Sinus infection or nasal congestion.	Contact your physician or home care provider immediately.
Runny nose.	Reaction to the airflow and pressure.	Stop the treatment. Contact your physician.
Dryness or irritation of the eyes.	Air leak around the mask.	Reposition the mask. Ask your physician or home care provider to try different sizes of mask.
Redness of the skin in contact with the mask.	The headgear is too tight or too small.  Allergic reaction to the components of the mask or headgear.	Adjust the headgear. Contact your physician or home care provider to try on masks of different sizes.  Stop using the mask. Contact your prescribing physician or home care provider.

PROBLEM	PROBABLE CAUSE	SUGGESTION
Recurrence of the first symptoms of sleep apnea syndrome.	The <i>GoodKnight</i> 420G is not set to the correct pressure or is not operating correctly. Your physical condition or your pressure needs have changed.	Ask your home care provider to check the operation of the <i>GK420G</i> .  Contact the ordering physician.
The <i>GoodKnight</i> 420G does not come on (no display).	Verify that the power supply module is properly connected. No AC power.  The fuse of the device has blown.	Check the connections between the power supply module, the <i>GK420G</i> and the electric outlet.  Use another appliance, such as a lamp or radio to check that the AC power supply is present at the outlet.  Contact your home care provider to get information on the way of returning the device to the technical department.
The <i>GoodKnight</i> 420G is not running properly and seems to be subject to interference.	Excessive electro-magnetic interference.	Move the device away from sources of interference such as halogen lamps and cell phones, etc.
<b>9:33</b> is displayed. (value given as a guide only)	The appliance is connected to the mains and remains on standby.	This message disappears if you press the <b>ON/OFF</b> button. (See reference 4 in Figure 2, page 5).
<b>4.0 cmH<sub>2</sub>O</b> is displayed. (value given as a guide only)	Set pressure level (equivalent to the pressure in the mask for a hose of 1.80 m).	This pressure level has been prescribed by your doctor; it can only be altered by medical prescription.  If the ramp function is active, this level of pressure will increase progressively before reaching the prescribed value and the ramp indicator is displayed.
<b>In 01</b> is displayed.	The mask is disconnected.	Check the connections between the mask, the hose and the device. This message disappears as soon as the mask is well connected.
<b>In 03</b> is displayed.	Reduction of the power supply voltage.	Check the connections between the power supply module, the <i>GK420G</i> and the mains socket. Unplug the power supply module, then connect it again to the mains. If the problem remains, contact the home care provider.  Check the external battery and replace it, if necessary. If the problem remains, contact the home care provider.
<b>Er XX</b> appears on the display. (XX = 2 digits).	The device has detected an operating fault.	Contact the home care provider.

## TECHNICAL CHARACTERISTICS

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### Device performance

Pressure range of the <i>GoodKnight</i> 420G:	4 cmH <sub>2</sub> O to 20 cmH <sub>2</sub> O ± 1 cmH <sub>2</sub> O adjustable by increments of 0.5 cmH <sub>2</sub> O
Maximum achievable pressure at the patient connection port under single fault condition:	24 cmH <sub>2</sub> O
Ramp time:	0 to 30 minutes ± 1 minute device adjustable by 5-minute increments
Sound level measured in accordance with: PrEN ISO 17510-1 :2001	25.1 dBA
Maximum sound level:	31 dBA at 10 cmH <sub>2</sub> O
Lifetime of the battery soldered onto the board:	> 5 years

### Physical characteristics

Dimensions (W x H x L ):	5.6 x 2.9 x 7.7 in (without power supply)
Weight:	1.54 lb (without power supply module)

### Transport and storage conditions

Temperature:	-20°C to +60°C (-4°F to +140°F)
Relative humidity:	up to 95 % without condensation
Relative pressure range:	500 hPa to 1060 hPa (1 hecto-Pascal $\simeq$ 1 cmH <sub>2</sub> O)

### Conditions of use

Temperature:	+5°C to +40°C (+41°F to +104°F)
Relative humidity:	between 10 % and 95 % without condensation
Relative pressure range:	700 hPa to 1060 hPa (1 hecto-Pascal $\simeq$ 1 cmH <sub>2</sub> O)
Operating Altitude:	0 to approximately 7,800 ft (0-2400 m)

### Disposal of the *GoodKnight* 420G at the end of its life

In order to protect the environment, various parts of the equipment and its accessories must be disposed of in conformity with the local regulations.

## Electrical characteristics of the power supply module

Class II power supply: Input voltage: 100 – 240 VAC (-10%, +10%), 50 / 60 Hz ( $\pm 1$  Hz)



Input current: 550 mA (Egston), 600 mA (Anam).

Output voltage: 13 V – 1.85 A (Egston) / 12 V – 2 A (Anam).

Power supply provided with the device: Egston N2UFMW 24 W 13 V or Anam TA2412 24 W 12 V.

### CAUTION

- Use only one of the above-mentioned specific power supplies provided with the device.
- The above-mentioned power supply modules are not intended to be repaired. In case of failure, please contact your service provider to have the module replaced.

## Electrical characteristics of the device

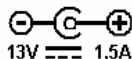
Input voltage: 13 V – 1.5 A.

Maximum power consumed : 20 W (without humidifier)

Current consumed at 20 cmH<sub>2</sub>O with a 4 mm leak: 0.750 A.



Direct current



13 V power connector

## Symbols



ON/OFF



Information Access



Ramp



Increases setting values



Reduces setting values



Output connector

**IPX1**

Device protected against the vertical falls of water drops.



Type B device



Consult the instructions for use before using this device.

**CE 0459**

Device complies with the requirements of the directive 93/42/CEE relating to medical appliances.

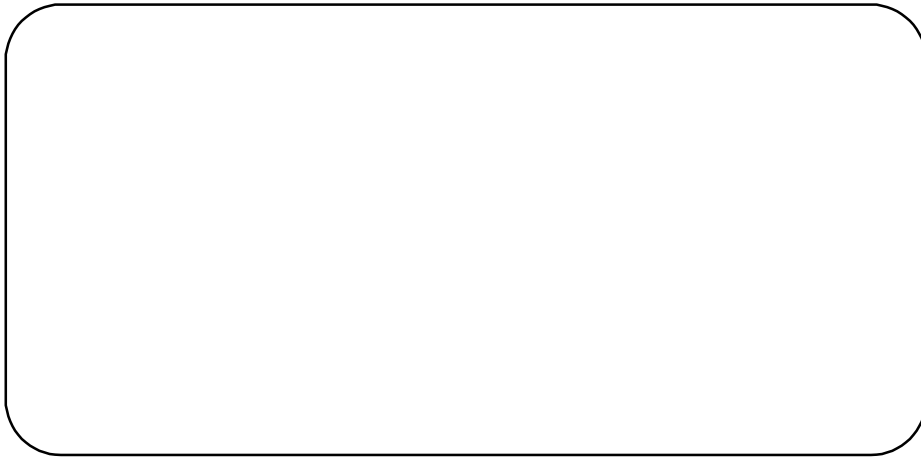
**Rx ONLY**

For USA only:

Federal law restricts this device for sale by or on the order of a physician.



**Homecare Provider Information**



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