

Operating Instructions

B-Timer Filter Cartridge Lifetime Computer for Filter Systems P21 P31 P41

Introduction

Read the operating instructions carefully before operating the unit. (Applicable for units from version 300.301.811 up).



The settings in the setup menu are essential for the correct indication of the filter capacity. Without correct settings, the B-Timer can be used as an hourmeter, only!



Make sure that the pressure maintaining valve of the compressor is adjusted to 150 bar (factory setting) and is working properly to ensure correct indication of the filter capacity and compressor operation recognition.

Description

The **B-Timer** (Fig. 1) is a self-activating mini-computer that counts the operating hours of the compressor and calculates the saturation of the filter cartridge from time, temperature, cartridge type, and delivery rate of the compressor. It displays operating hours, cartridge lifetime, and all maintenance due for the compressor. The **B-Timer** does neither need external power nor any other connection to the pressure system. It is simply fastened to the filter housing which has to be monitored, by means of a clamp, and is therefore the ideal filter control device for all mobile compressor units, especially for portable petrol or diesel driven scuba diving models. In addition, the B-Timer can be mounted easily to any unit as an upgrade device.

Authorized use

This unit is to be used exclusively as operating status monitoring device and does not release the user from additional surveillance and testing of the breathing air quality of the filter system according to national standards (e.g. EN 12021). With the **B-Timer**, this is **not** possible!

The **B-Timer** may only be used with the filter systems specified above. The respective filter cartridge numbers are stored in the software. Other use is strictly prohibited. The manufacturer and the supplier void all responsibility for risk, damage or injury resulting from failure to follow these instructions.

Observe the operating limits of the unit:

Operating temperature range 0° C to +50 °C,

Storage temperature -20° C bis +70 °C

Protection class IP65 (Protection against contact with wire, dust, and jet of water)

Vibration ± 3g in operation

max. 95% humidity, not condensating

Mounting

Mount the B-Timer with the supplied clamp in the center of the filter housing, on P41 filter system at the separator housing. It has to have contact to the housing with both straps of the back plate. Make sure not to touch other mounting clamps of the filter. Should the B-Timer have to be re-mounted, e.g. when changing the filter housing, ensure that the temperature pad on the back plate is not damaged.



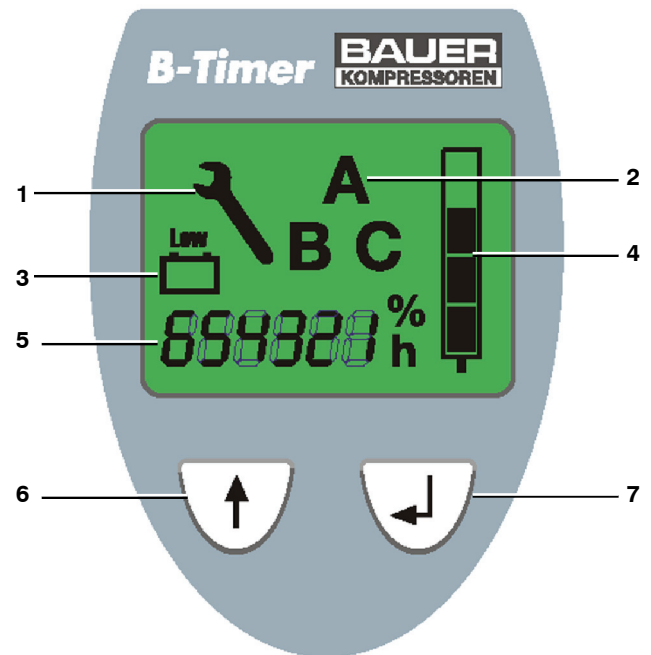
Fig. 1 B-Timer

Function

The B-Timer display shows the following functions:

- Operating hours of the compressor unit The flashing h-symbol shows that compressor operation has been detected.
- Cartridge lifetime in % by means of four segments in the cartridge symbol.
- Flashing last segment and change from operating hours indication to cartridge part no. if capacity is equal or less than 20% of the original lifetime.
- Indication of compressor maintenance due by means of letter symbols and operating hours.
A = 500 hours or 1 year
B = 1000 hours or 1 year
C = 2000 hours or 2 years
- Battery symbol indicating that the lithium battery is low and has to be changed. **All data are stored and will not be lost when changing battery.**

The **B-Timer** is operated using the mode select and the enter keys.



- 1 Key symbol (maintenance due)
- 2 Letter symbol (maintenance type)
- 3 Low battery symbol
- 4 Cartridge saturation indicator
- 5 Operating hours or cartridge number
- 6 Mode select key
- 7 Enter key

Fig. 2 Display

Error indication

If the temperature sensor in the unit should be defective, an error message "Error 1" or "Error 2" is shown at the display (Fig. 3). In this case the unit should not be used but sent to the factory or the nearest BAUER representative for repair.

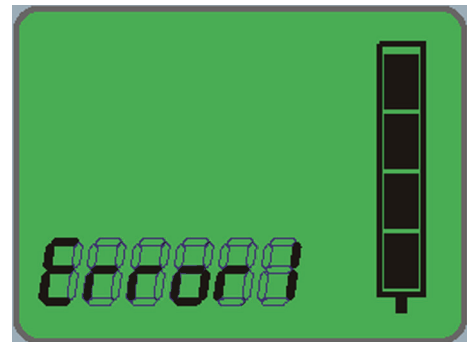


Fig. 3

Battery change

The battery (1, Fig. 4) is merely inserted into the holder. To change the battery remove plug (2) and pull out battery. Make sure to use the same type battery (BAUER part no. 82743).

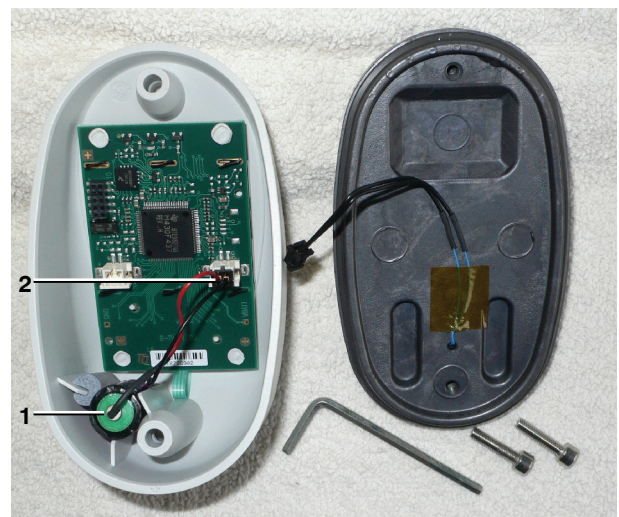


Fig. 4 Battery

Operation



The B-Timer is activated when starting the compressor. Compressor operation is indicated by the flashing "h" symbol.

To switch on the B-Timer press one of the keys on the display. Main menu will be displayed (Fig. 5).



If no key is pressed within 1 minute, the indication will return to the main menu. After 2 minutes the B-Timer is switched off, if no compressor operation is detected.

Function Display



To *display* the desired function, press the select key (↑).

Press ↑ key. Remaining filter capacity is shown, (Fig. 6)

Press ↑ key again. Remaining operating hours to service interval A (500 hours or annually) are shown (Fig. 7).

Press ↑ key again. Remaining operating hours to service interval B (1000 hours or annually) are shown (Fig. 8).

Press ↑ key again. Remaining operating hours to service interval C (2000 hours or biennially) are shown (Fig. 9).

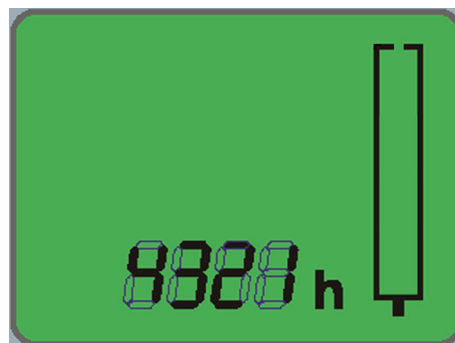


Fig. 5

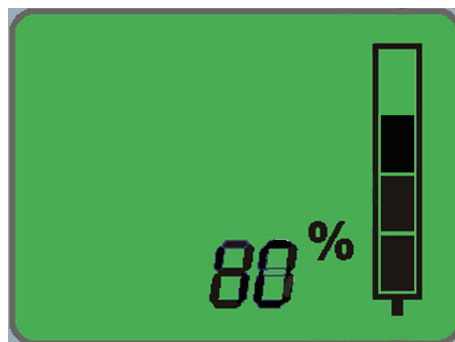


Fig. 6



Fig. 7

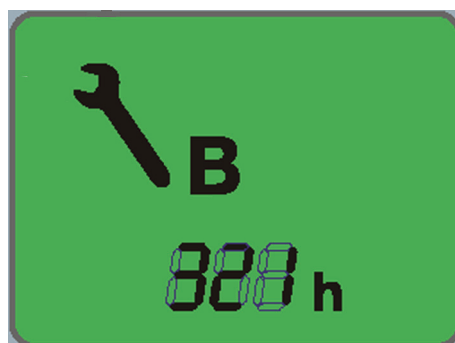


Fig. 8

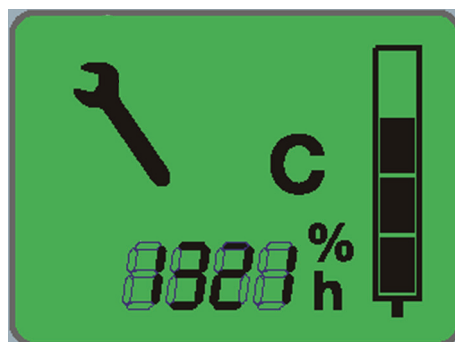


Fig. 9

Press ↑ key. Filter cartridge number is shown (Filter symbol flashing, Fig. 10).

Press ↑ key again. Display returns to the main menu.

Reset



The filter capacity must not be reset unless a new filter cartridge has been fitted!

To **reset** the filter capacity or the A, B, and C maintenance intervals, press ↓ key for more than 5 seconds from the respective maintenance interval display (Fig. 11).

Setup

To **enter the setup** for the different functions of the **B-Timer** press the ↑ and ↓ keys on the display simultaneously for more than 5 seconds from the cartridge number display (Fig. 10). Filter symbol starts flashing (Fig. 12) indicating the setup mode.

Under **setup A** the filter cartridge number is set. To change cartridge type, press ↓ key for 3 seconds, the number starts flashing. Press the ↑ key to select the correct number, press ↓ key to accept the new setting.



Numbers beginning with 999 require a special adjustment:

Press ↓ key for 3 seconds. Press the ↑ key to select 999000, the last 0 starts flashing. Press the ↑ key to select the correct number, then press ↓ key: the second 0 will start flashing, proceed as above and finally adjust the 3rd 0 accordingly.

Pressing the ↑ key, display changes to **setup B** for the delivery setting (in ltrs/min). Filter symbol starts flashing (Fig. 13). To change delivery, press ↓ key for 3 seconds, the 1st digit starts flashing. Press the ↑ key to select the correct number, press ↓ key to accept the new setting. Repeat procedure for the other two digits

Pressing the ↑ key again, display changes to **setup C** for the pressure range setting. Filter symbol starts flashing (Fig. 14). To change pressure, press ↓ key for 3 seconds. Press the ↑ key to select the correct pressure (200, 300 or 200/300), press ↓ key to accept the new setting.



After finishing setup and fitting a new cartridge, the filter capacity has absolutely to be reset, see "Reset" above.

Pressing the ↑ key again, display changes to the menu for **adjusting the operating hours**. Press ↓ key for 2 seconds, the last digit will start flashing. Press the ↑ key to select the correct number, then press ↓ key etc., until all digits are set. Then pressing the ↑ key twice will lead back to the main menu, Pressing the the ↑ key and the ↓ key gives the possibility to readjust the hours again, if required.

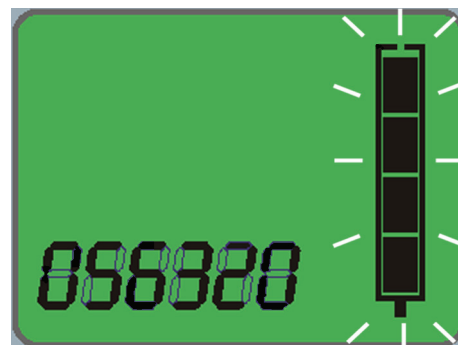


Fig. 10

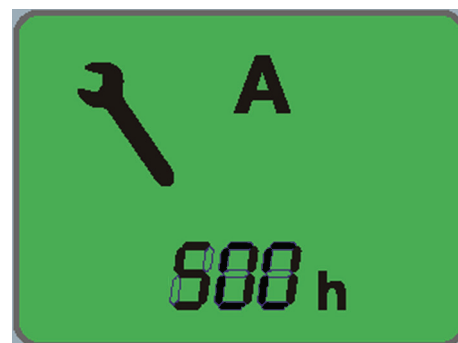


Fig. 11

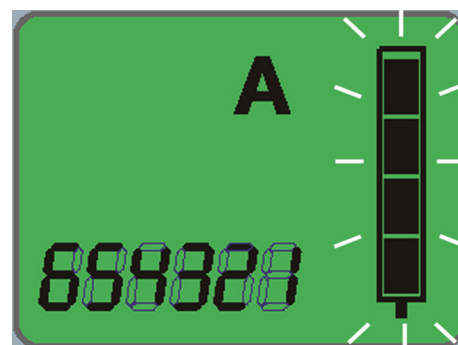


Fig. 12

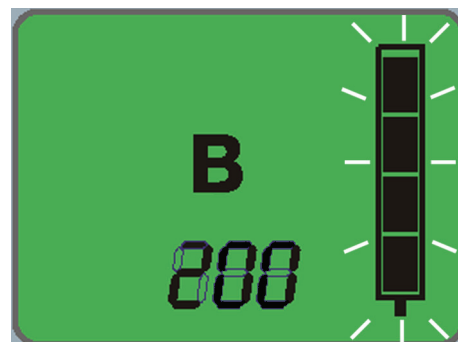


Fig. 13

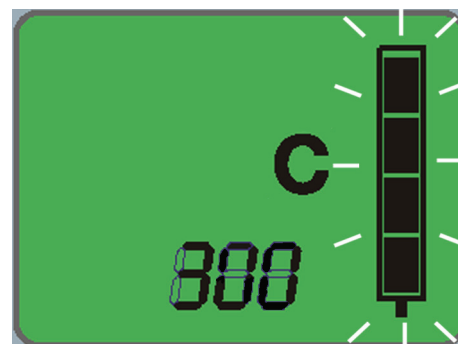


Fig. 14