

# Perfusor® compact<sup>plus</sup>

Service Manual EN, Version 2.0



# 2 Unit Diagnosis / Calibration

## ALARMS AND ERROR MESSAGES

The alarms of the Perfusor® compact<sup>plus</sup> are grouped into different categories. The categories are listed below in order of increasing importance.

### ■ Advisory alarm

A message is output if incorrect entries are made (e.g. "Maximum reached", "The parameter cannot be changed") and an audible signal is output.

### ■ Reminder alarm

A reminder alarm is triggered if the device is not operated for two minutes after an incomplete entry or operator action on the device.

### ■ Pre-alarm

Pre-alarms are triggered several minutes (depending on the service settings) before the operating alarms.

### ■ Operating alarm

If an operating alarm is output, infusion is stopped. An audible signal is output, the red LED flashes and a staff call is triggered. The message "Alarm" and the cause of the alarm appear on the display.

### ■ Device alarm

If a device alarm is output, infusion is stopped immediately. If the device is restarted and the alarm is displayed again, servicing of the unit is required.

The most important alarms and error codes as well as their meaning and possible fault clearance are specified in the following sections.

See Instructions for Use.

## PRE-ALARMS AND OPERATING ALARMS

## STANDARD DEVICE ALARMS

**Appearance**

Header with short information (e.g., "Device alarm") and 4-digit error code (e.g., „0325"). Footer with on/off-icon and short text (e.g., "Switch off device").

**NOTICE**

In case a device alarm appears, please switch the device off and on. Further action only needs to be taken if the alarm persists.

**Error codes of the function microprocessor (FuP)**

Code	Definition	Possible cause	Fault rectification
300	Pressure values delayed	Software failure If error appears frequently: Hardware defect	
301	Syringe size values invalid	Calibration failure Potentiometer disconnected Hardware defect	Re-calibrate pump Check potentiometer
302	Drive position, data invalid	Calibration failure Hardware defect	Re-calibrate pump
303	Syringe sensor (digital input) data invalid	Hardware defect	
311	Reference drive, maximum allowed motor steps exceeded	Calibration failure Hardware defect	Re-calibrate pump
319	Validation of displayed syringe failed	Software failure	
320	Reference drive, magnet active	Hardware defect	
321	Drive unlocked, when syringe in place	Hardware defect	
322	Calibration invalid	Calibration failure	Re-calibrate pump
323	Claws not open when drive is unlocked	Hardware defect	
324	Force sensor invalid data	Calibration failure Hardware defect	Re-calibrate pump
325	Key panel activated	Key panel failure	Change upper part of housing
326	Key panel not confirmed by KuP	Hardware defect	Change upper part of housing
350	Pressure values delayed	Software failure	
357	Drive head self check, unexpected error	Software failure If error appears frequently, hardware defect.	

Table 2 - 1 Error codes of the FuP