

## Reasons for alarms and errors and corrective actions

Note: This guide does not replace the need for the Operator's Manual for Double® Pump. The goal of this guide is to give some hands on tips to possibly avoid some common alarms and error situations.

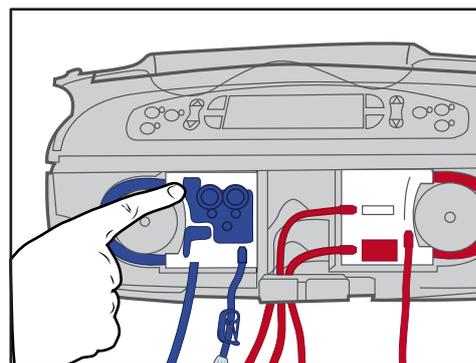
Note: An Alarm is a quite normal way for the pump to say that something is off limit or not normal. Alarms are meant to attract attention, for instance, to replace the saline bag. An Error is a more serious situation related to a technical abnormality that must be attended to, to maintain safety.

### Mounting of Day Cassettes – error

Many error situations that occur have to do with incorrect positioning of the Day Cassette. It is critical that the Day Cassette is correctly mounted since there are two pressure sensors that simultaneously read the pressure in the Cassette. If the Day Cassette is tilted slightly, the pressure sensors will read different pressures which will result in an error code.

Therefore, after the Day Cassette is mounted, push all 4 corners of the Day Cassette, to safeguard that the Cassette is properly mounted.

Note: The Day Cassette button can flash even if the Day Cassette is not 100 % in place. The reason is that a micro switch senses the position of the Day Cassette. This may indicate if the Day Cassette has not fully snapped in place.



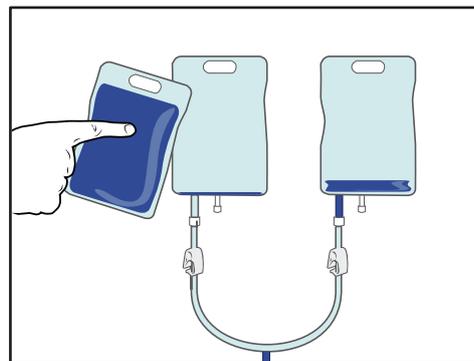
### High pressure – alarm

In some occasions the pressure in the Day Cassette can be too high. The cause can for example be that the joint is bent. If the pressure exceeds 180 mmHg, a High Pressure Alarm will sound in 10 sec, and stop the pump. If the pressure is not lowered, the pump is not possible to Run. This alarm can be muted by selecting soft key "M".

To solve this, the pressure must be lowered first, and then it is possible to Run the pump again.

### Low pressure (empty bag) – alarm

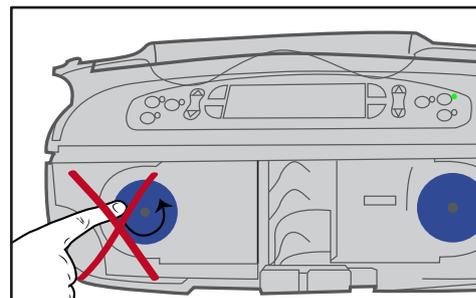
Double® Pump is very silent compared to other pumps on the market. One can therefore easily miss the typical sound when the pump runs out of irrigation liquid. If the pump runs into low pressure alarm due to an empty saline bag, the nurse has to replace the bag with a new one, press Run to let the pressure in the joint build up, and then the procedure can continue. This alarm can be muted by selecting soft key "M".



### Manually turning the pump wheel – error

When the pump is powered on, the operator should not turn any of the pump wheels manually. If the wheel is turned by hand the pump will go into error mode.

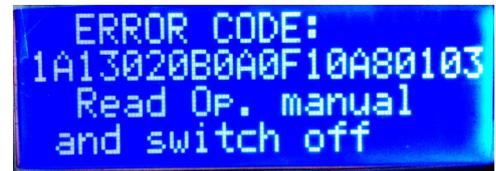
The pump wheels can be turned when the pump is turned off, please see the picture.



## Solutions if an Error occur

If Double® Pump goes into error mode for any reason, please follow these simple steps to restart the pump:

1. Please note the error mode for reference to service personnel (usage of camera on a mobile phone can be a good idea).
2. Turn off the pump with the mains switch on the rear panel.  
Note. When the pump is in error mode, all buttons on the front panel are disabled.
3. When the pump is turned off, please make sure there is no over pressure in the Day Cassette. Relief pressure by ensuring that the white clamp by the outflow of the Day Cassette is open, and by opening the stopcock on the arthroscope. Thereafter press all for corners on the Day Cassette to make sure it is correctly mounted. Close the stopcock.
4. Turn the pump back on with the rear main switch.
5. Push the "On/Standby" button on the front panel.
6. Follow the instructions on the display to continue the procedure.
7. If the pump keeps entering into Error mode, it must be serviced by an authorized engineer.



ERROR CODE:  
1A13020B0A0F10A80103  
Read Op. manual  
and switch off

## Pump arm falls down during transport

When Double® Pump has been transported (in a car or through courier), it sometimes happens that the pump arms fall down over the pump wheels. To raise the pump arms, turn the pump wheel counter-clockwise for the Day Cassette, and clockwise for the Patient Cassette - before powering the pump on.

Note. The pump has to be switched off to turn the pump wheel, otherwise the pump will go into error mode.

