

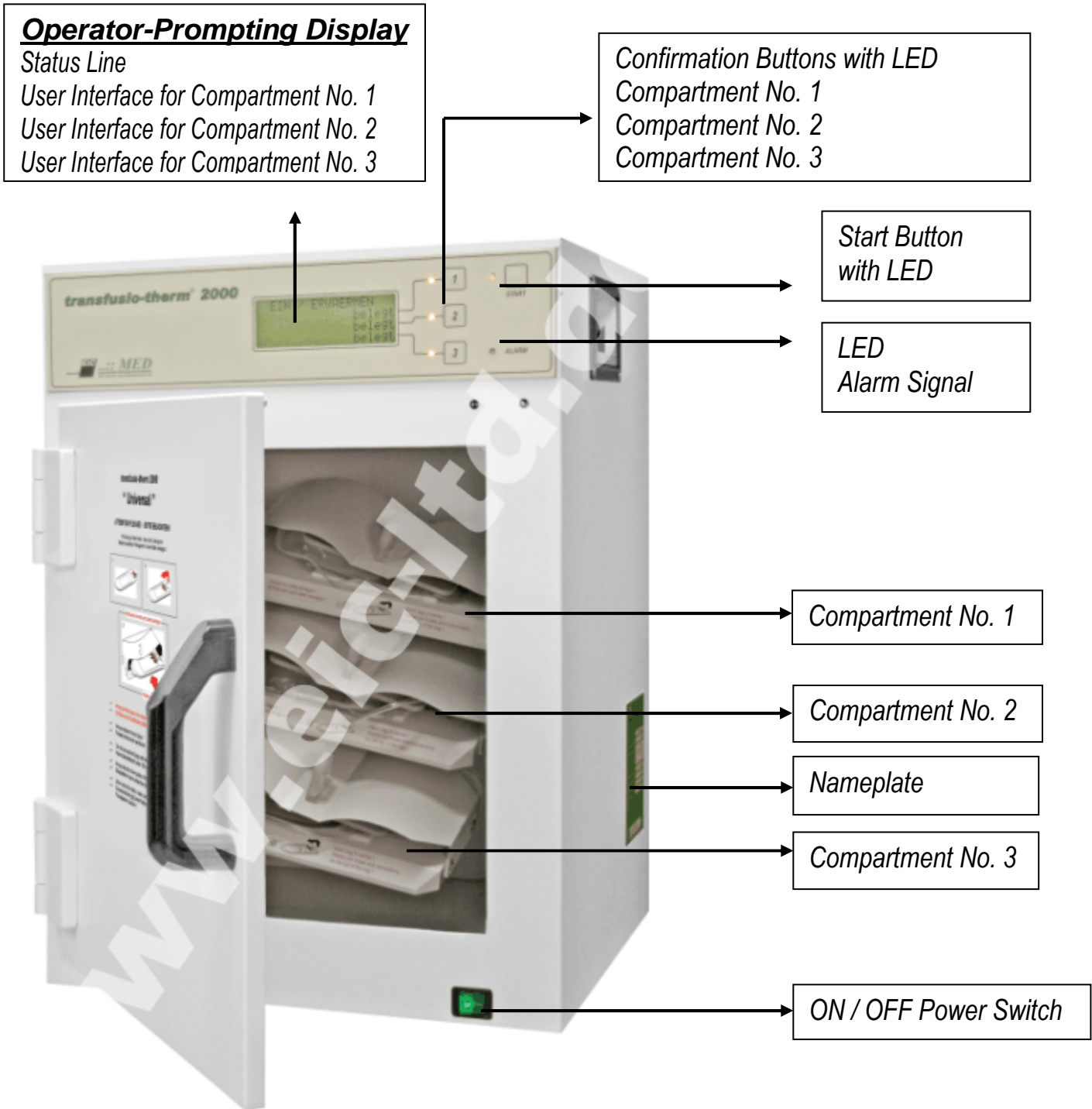
transfusio-therm[®] 2000



Quick Reference Guide

The Quick Reference Guide must be kept directly on the transfusio-therm[®] 2000 in a clearly visible manner. Be certain to observe the following sequence of operations and suggestions when putting the transfusio-therm[®] 2000 into operation and when using it.

I. Overview



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II. Start-up and Operation

Item No.	Step	Activity	Display	Important: Be Sure to Pay Attention to the Comments Below.
01	Switching the appliance on	Use the ON / OFF power switch to switch the appliance on.	SELF-TEST; ON VACANT	Appliance carries out a self-test (approx. 3 seconds).
02	Opening the door	Use the door handle to open the door.	ON	
03	Loading a compartment	To load a blood bag into any vacant compartment, <ul style="list-style-type: none"> • prepare the bag, as shown in the pictograms and described in the instructions provided; • raise the spring plate of the compartment; • place the bag in the middle of the compartment; • make sure that tube ends / connectors are located on the right-hand side and on top of the bag; • release the spring plate. • IMPORTANT Bag filling volume: 100 ml to 600 ml 	ON -----	<p>Place the bag in the middle of the compartment, with tube ends located on the right-hand side and on top of the bag.</p> <p>Always make sure that tubes do not protrude from the compartment.</p> <p>When it comes to bags containing plasma / FFP, tube connectors frozen in a bent position must be located on the right-hand side and on top of the bag. If the connectors are frozen in a straight position, the bag is to be inserted with the connectors located on the right-hand side.</p> <p>It is possible to thaw a blood bags inserted into protective bags, provided the above instructions are observed.</p>
04	Closing the door	Use the door handle to close the door.	ON	
05	Confirming loading	When prompted by the yellow flashing LED and the text appearing in the display, press the confirmation button of the compartment just loaded.	ON CONFIRM LOADING	
06	Start	When prompted by the yellow flashing LED, press the start button.	ON / START LOADED	
07	Thawing / heating	A star symbol will appear in the Universal model and when fresh frozen plasma (FFP) bags are inserted. This star will be extinguished when approximately +20° C are reached, with an acoustic signal indicating that the bag has thawed and may be removed, as required. If the bag is not removed, heating will continue until the target temperature is reached.	ON / HEATING LOADED Star symbol if the bag contains FFP	<p>The appliance will automatically recognize bags that are already heated. If this is the case, the appliance will shut down. An intermittent alarm tone will be sounded. A read flashing signal will appear on the compartment concerned, and the display will show REMOVE / CHECK BAG. Remove the bag. Check the temperature of the bag and/or reinsert the bag. Once the loading of the bag has been confirmed and the start button pressed, the heating process will continue.</p>



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08	Target temperature reached	Automatic acoustic signal and green flashing LED on the compartment concerned	ON x °C / CONFIRM DEFROSTED / CONFIRM	The set target temperature will be displayed.
09	Confirming the removal	Press the confirmation button of the compartment concerned.	ON REMOVE BAG	
10	Opening the door	Use the door handle to open the door.	ON LOADED	
11	Removing the bag	Follow the steps below to remove the bag: <ul style="list-style-type: none"> • Raise the spring plate of the compartment. • Remove the bag. • Release the spring plate. 	ON -----	Once the bag has been removed, the compartment can be loaded again. To do so, start with Item 03.
12	Closing the door	Use the door handle to close the door.	ON VACANT	The appliance is ready for use. For longer periods of non-use, turn the appliance off, using the ON / OFF power switch.

III. Safety Comments

Item No.	Subject	Information	Display	Important: Be Sure to Pay Attention to the Comments Below.
13	Special operating note	If a bag has been inserted into the compartment, with no operating action taking place (with the door open or closed), although a relevant prompt has appeared in the display, an acoustic signal sounded after approximately 5 minutes will remind the operator to resume work on the appliance.		Whenever an acoustic signal is sounded, it is imperative that you go to the appliance and act upon the prompt.
14	Safety shutdown	If the two-channel monitoring system of the appliance detects an error in any compartment area, the compartment will be blocked, as signaled by a steady red light of the LED.	ON / SERVICE BLOCKED	Do not use the blocked compartment. Proceed as described in Item 16, which addresses a protective shutdown.
15	Inadvertent loading of a compartment following a safety shutdown (13)	If a shutdown compartment is loaded inadvertently, the red LED will change from a steady light to a flashing one.	ON / SERVICE REMOVE BAG	After pressing the confirmation button and removing the bag from the blocked compartment, you can continue using those compartments of the appliance which are not blocked.
16	Protective shutdown	All the compartments are shut down whenever the two-channel monitoring system of the appliance detects a malfunction in the overall system. The compartment LEDs and the alarm LED will show steady red light.	OFF PROTECTIVE SHUTDOWN NOTIFY SERVICE	In the event of a protective shutdown, please be sure to turn the appliance off, using the ON / OFF power switch. Open the door and check that all the bags are inside the compartments and that they are not damaged. If necessary, remove all the bags from the compartments. Check the temperature of the bags. Destroy



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			<p>them if they are found to be warmer than 41° C or show any visible signs of external damage.</p> <p>Clean the appliance whenever any bag leakage has occurred.</p> <p>Use the ON / OFF power switch to turn the appliance on again.</p> <p>If the self-test (1) is successful, the appliance can continue to be operated in the usual manner. Notify the Service Department immediately if the self-test triggers a protective shutdown.</p>
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IV. Suggestions for Cleaning and Disinfection

Item No.	Subject	Actions Activities	Important: Be Sure to Pay Attention to the Comments Below.
17	Initial cleaning	<p>OUTSIDE SURFACES: Exclusively use a wet cloth and a mild detergent.</p> <p>SEALING SURFACES (the four sides of the front face of the housing around the interior and on the inside of the door): Exclusively use a wet cloth and a mild detergent. Do not turn the appliance on when sealing surfaces or the door are damaged.</p> <p>INTERIOR: Exclusively use a wet cloth soaked with a conventional disinfectant approved under applicable medical regulations.</p> <p>ROTATING UNIT: To facilitate cleaning, the rotating unit can be taken out as a whole. To this end, remove the safety hook and pull the rotating unit off frontwards. To remove the spring plates, loosen the four screws with which they are fastened.</p> <p>To prevent damage, proceed with particular care when cleaning temperature measuring points (silver plates). After cleaning, wipe all parts dry and screw the spring plates on again tightly. Push the complete rotating unit, from the front, onto the drive shaft as far as it can go. Then, reinsert the safety hook. Before putting the appliance into use again, check that the rotating unit is properly fitted.</p> <p>Be sure to clean the motor shaft and the plug-in device of the rotating unit <u>dry</u> only.</p>	<p>Always pull the power plug before cleaning the appliance.</p> <p>Do not use any scouring agents or scratching or pointed objects for cleaning.</p> <p>WARNING: Never rinse the rotating unit with running water or clean it with the aid of washers or disinfectors.</p> <p>Never operate the appliance when the rotating unit is not properly and securely positioned and/or the safety hook is not fully inserted.</p> <p>When the message "Important: Check Mounting of Rotating Unit" appears on the display, switch off the appliance and recheck that the rotating unit is properly fitted.</p>
18	Bag leakage	Clean the affected surfaces and/or the rotating unit, as described in Item 17.	Be sure to heed the instructions furnished in Item 17.
19	Regular cleaning and disinfection; maintenance	<p>Follow your in-house hygiene routines and regulations. Pay particular attention to the cleanliness of the temperature measuring points (silver plates).</p> <p>Do not apply oil and other lubricants to the motor shaft and plug-in device, as this may adversely affect electrical conduction.</p>	Be certain to heed the instructions provided in Item 17.

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20	Readout of the error code Error message	When switching the appliance on, keep button no. 3 depressed until the error code appears in the display. Button no. 1 lets you browse through the errors all the way to error no. 31. To get the number of bags heated, press button no. 2. Record the read-out error code, together with the serial number of the appliance (see nameplate attached on the right-hand side of the appliance), in a fault report form and fax or e-mail this form to EIC Ltd.	
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Meaning of the failure codes safety shutdown
„transfusio-therm 2000“ **controller version 7 and 8**

Code	Error	
0	Door switch, different signals	Equipment protective cut-off
1	Error turning / blocked or protective cut-off 2nd system	Equipment protective cut-off
2	Error turning / over-wound	Equipment protective cut-off
3	Error magnetron / does not switch on or protective switching 2nd system	Equipment protective cut-off
4	Error magnetron / does not switch off	Equipment protective cut-off
5	Error antenna / turns too slowly	Equipment protective cut-off
6	Deficient self-test	Equipment protective cut-off
7	T1...T6 > 41 °C	Equipment protective cut-off
8	Full sensor 1 open, Full sensor 2 closed	Equipment protective cut-off Intake 1
9	Full sensor 2 open, Full sensor 1 closed	Equipment protective cut-off Intake 1
10	Temperature difference > 1 °C	Safety cut-off Intake 1
11	Break in the temperature sensor cable	Safety cut-off Intake 1
12	T1 or T2 > 39 °C	Safety cut-off Intake 1
13	Intake leaky (HF)	Safety cut-off Intake 1
14		
15		
16	Full sensor 1 open, Full sensor 2 closed	Protective cut-off Intake 2
17	Full sensor 2 open, Full sensor 1 closed	Protective cut-off Intake 2
18	Temperature difference > 1 °C	Safety cut-off Intake 2
19	Break in the temperature sensor cable	Safety cut-off Intake 2
20	T1 or T2 > 39 °C	Safety cut-off Intake 2
21	Intake leaky (HF)	Safety cut-off Intake 2
22		
23		
24	Full sensor 1 open, Full sensor 2 closed	Protective cut-off Intake 3
25	Full sensor 1 closed, Full sensor 2 open	Protective cut-off Intake 3
26	Temperature difference > 1 °C	Safety cut-off Intake 3
27	Break in the temperature sensor cable	Safety cut-off Intake 3
28	T1 or T2 > 39 °C	Safety cut-off Intake 3
29	Intake leaky (HF)	Safety cut-off Intake 3
30		
31		