

STEM CELLS & PLASMA THAWER



NO VIBRATIONS



CONTINUOUS WATER MASSAGE FOR UNIFORM HEATING



LOW NOISE
 $< 35\text{dB}</math>$



SEPARATED, INDEPENDENT CYCLE & WASHABLE POCKETS



DRY HEATING
NO WATER REPLACING NEEDED

CONTROLLER



7" TFT TOUCH SCREEN



LAN PORT



2X USB PORT



DATA LOGGER CAPABILITIES FOR THAWING CYCLES AND ALARMS



INTERNET CONNECTIVITY



SD SLOT

ASYNCHRONOUS AND UNIFORM THAWING

The WPDF line is a real novelty in the thawing market. Plasma and stem cells bags can be thawed in complete fast, safe and independent ways granting the easiest working experience for the user. Up to three different thawing cycles can be activated simultaneously granting the maximum flexibility of the use.

TOTAL TRACEABILITY AND REAL TIME MONITORING

During the use, it is possible to trace every phase of the thawing process: the system, by reading barcodes or RF-IDs, can recognize the operator, the type of bag and therefore from the bag trace the donor. All information is automatically stored in the internal memory of the device and can be transferred automatically on the local network, thanks to the ethernet connection and USB port.

FEATURES

- ☑ **Maximum hygiene**
Antibacterial plastic material and AISI 316
- ☑ **Maximum safety**
Complete separation between the plasma bags and the heating water
- ☑ **Maximum reliability**
Dedicated temperature probe for each bag for a complete control of thawing cycle
- ☑ **Maximum parameter's visibility**
7" TFT touchscreen display

BAGS IDENTIFICATION

The machine can be equipped with an optional barcode reader which allows to recognize, store and record the identification data of the bag and the operator for each thawing cycle. Bags RF-ID tags can also be read with dedicated optional accessory, making the system ready for the introduction of this new management technology.

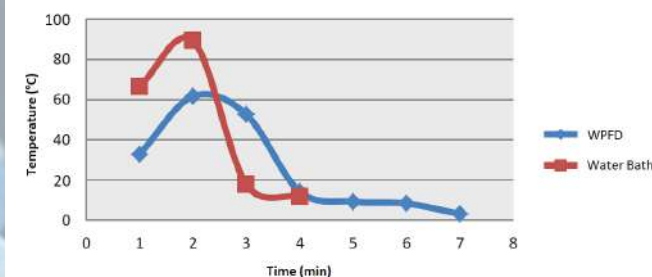
CYCLE RECORDING/ IDENTIFICATION

The thawer stores the cycle operating data once a minute on an internal SD Card. Through an optional bar code reader, every cycle can be completely traced reducing the possibility of human errors and granting the maximum safety of the whole process. Thanks to the wide 7" TFT touchscreen display the whole process is under control: color graphics and visual/acoustic alarms guide the operator during the complete process.

STEM CELLS THAWING (CLINICALLY VALIDATED)

Several clinical experiences of hematopoietic stem cells thawing conducted in Italian laboratories* validated the WPDF line of KW for the use with stem cells.

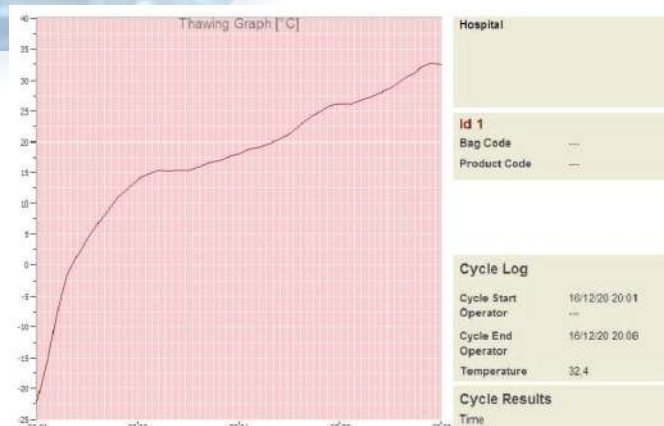
AVERAGE TEMPERATURE INCREMENT



The graphs of thawing and subsequent heating of the stem cells are perfectly superposable to those made with the classic method of thawing in use (water bath at +37°C).

Thanks to the water massage, there is an average temperature increase of the stem cells more linear compared to classic water bath, ensuring a lower thermal shock to the cells.

THAWING CYCLE WPDF



The post thawing recovery for CD34+ cells and leukocytes is similar or even better with KW's thawer, compared to traditional processes. The process of stem cells handling is safer and supported by a documented traceability, extremely useful for the evolution of the laboratories in terms of processes' quality management.

* V.Becherucci, L.Piccini, V.Gori, S.Bisin, B.Bindi, R.Ceccantini, P.Pavan, V.Cunial, S.Ermini, F.Brugnolo, F.Bambi, *Leukapheresis for autologous stem cell transplantation: comparative study of two different thawing methods WSCFD® Stem Cell Fast Thawer KW versus 37°C thermostatic bath, Transfusion and Apheresis Science, Volume 53, Issue 3, December 2015, Pages 342-347.*

The KW thawers line, which has several sensors in each pocket, continuously keeps the temperature of each bag under control, ensuring total traceability of the whole thawing process and the perfect homogeneity of the thawed plasma. Thanks to the new water pumps, the systems can subject the bag to a hydro massage treatment, so that the plasma, at the end of thawing, becomes homogeneous by achieving a better quality.

VERSATILE FOR MULTIPLE DISCIPLINES

OPERATING PARAMETERS

- End of cycle temperature
- End of cycle time
- Thermal vector's set point
- Bag's number
- Warming mode for heating blood components and solutions for infusions

SPECIFICATION

Plasma and Stem Cells Thawer	Model	WPFD 2/4	WPFD 3/6
Technical Characteristics	Chambers	2 (n°2 waterproof pockets in neoprene)	3 (n°3 waterproof pockets in neoprene)
	Thawing Capacity	2 (1000 ml) plasma bags / 4 (450 ml) plasma bags	3 (1000 ml) plasma bags / 6 (450 ml) plasma bags
	Thawing Cycle Length	20 minutes	
	T Regulation Range	up to +40°C	
	Chamber draining time	Approx. 5 minutes	
	Power Supply	110V-230V / 50Hz-60Hz	
	Power Consumption	max 685W	max 750W
	Noise Level	≤ 35 dB	
Structure	Front Shield	Antibacterial ABS	
	Upper Doors	Transparent methacrylate	
	Tank Group	Int/Ext antibacterial HDPE	
	Water Input	25 lt	38 lt
	External Dimensions	39 W x 64 D x 42 H cm	55 W x 64 D x 42 H cm
	Shipping Size (w. wooden crate)	85 W x 75 D x 70 H cm	
	Weight	25 kg	40 kg
	Shipping Weight (w. wooden crate)	55 kg	75 kg
Thawing System	Massage Mode	The thawing is uniform thanks to a continuous bags' agitation system (can be disabled)	
	Dry Thawing	No contact between the thawing water and the bags	
	Ease of Cleaning	The pockets are easily removable and washable under running water	
	Tank Emptying	Presence of faucet for fast water drainage; inner tank with inclined base for the total removal of water	
	Electromechanical and Electronic Part	Power heater n° 2 PT100 probes for water T control n°2 water level sensors Water recirculation pump in the chamber Plasma leak sensor Independent safety thermostat n° 2 PT100 probes for each pocket Water filling pump	

ACCESS AND SAFETY CONTROL

Each user can be associated with a password that grants different levels of access and functions:

- Cycle start / stop
- Parameters management
- Modality selection
- Alarm shut off

The temperature of each cycle can be controlled during the whole process: when the temperature limit is reached, the cycle is automatically stopped.

SPECIFICATION

Plasma and Stem Cells Thawer	Model	WPFD 2/4	WPFD 3/6
	HPL (High Performance Line)		
	Display	Display Touch-Screen TFT 7" - Microprocessor technology	
	Data Recording Format	SQLite (Tracer® software included for data reading)	
	T Regulation Accuracy	± 0.1°C	
	Access Control	Access to controller functions via safety password	
	Ease of Use	The user can display the surface temperature reached by the bag in real time	
		The whole process is recorded automatically	
		Total connectivity	
	Special Functions	Each cycle can be controlled by temperature or by time	
		Thawing cycle starts when the set water temperature (default 40°C) of the tank is reached	
		The thawing cycle can be started independently in all three pockets, even at different times.	
		The thawing process is constantly monitored and recorded	
		Possibility of tracing the thawing curve on the screen throughout the cycle time	
		Every single thawing cycle is stored in the memory to allow the historic retrieval	
	Settable Parameters	Thawing cycle setting to end when the set time is reached	
		Thawing cycle setting to end when the set T is reached	
		Thawing mode	
	Connectivity	n° 2 USB ports	
		Ethernet port	
	Alarm List (Audio/Visual)	End of thawing cycle	
		Over Temperature	
		Liquid presence in the bags	
	Optional Accessories (Available on Request)	Wi-Fi connection kit	
		Bar-Code reader with software Thawing Tracer	

Medical device systems certified under international regulation UE 2017/745 MDR Class I for blood and its derivatives management.

MDA APPROVED



Certificate No.: GA9962423-127377

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