



#### MANUFACTURER

KW Apparecchi Scientifici S.r.l.

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#### MODEL

KPFF 48B

Shock freezer for Plasma on contact

#### TECHNICAL CHARACTERISTICS

Wells	12
Plasma Bags Capacity	48 (450 ml)
Freezing Time	25-30 min
T Regulation Range	-70°C/-75°C
T Setting Resolution	± 0,1°C
T Reading Accuracy	± 0,5°C
T Ambient	max +32°C
Power Supply	230V / 50Hz
Noise Level	<62 dB
Power Consumption	max 1100W


#### STRUCTURE

Wells	Stainless Steel AISI 304	Insulation	PUR foam (175 mm)
External Surface	Satin-finished AISI 304 steel sheet	Door	Mounted on hinges with ABS cover
Handle	Ergonomic design	Standard Equipment	Pivoting wheels kit
Sealing	Triple silicone gasket		Door-lock with key
External Dimensions	179 W x 88 D x 126 H cm	Shipping Size (with wooden crate)	200 W x 110 D x 170 H cm
Weight	400 kg		500 kg


#### FREEZING SYSTEM

Vertical Freezing	The plasma bags are placed vertically in wells whose walls are at -80°C			
	Forces air (possibly present in the plasma bag) upward, minimizing the risk of bag rupture			
Min. Maintenance	No ice formation in the area surrounding the wells and in the sealing gaskets			
Reset T Set -75°C	Max 20 minutes after the extraction of a full load of bags			
Cooling System	Fully sealed circuit with n.2 hermetic compressors arranged in cascade			
Refrigerant Gas	1° Stage	R404a	2° Stage	R508b
Evaporating System	Copper tube coil thermally connected to the outer peripheral surface of the freezing wells			
	Powered by thermostatic expansion valve with external equalizer for maximum fluid injection			

#### THERMOREGULATION AND CONTROLS

µP Digital electronic controller, with LED display				
Functional LEDs	<b>Cooling:</b> indicates that refrigeration is in progress			
	<b>Alarm:</b> presence of T min / max alarm			
	<b>Timer:</b> indicates that the freezing time (which can be set by the user) is counting			
	<b>Power failure:</b> visual acoustic alarm energy failure self-powered by its own 12 Vdc 1.2A battery			
	<b>Remote control of signals:</b> alarms are integrated and connected to a remote signal repeater			

#### RTS SYSTEM - BAGS TEMPERATURE RECORDER (OPTIONAL)

RTS System		
Display	Display Touch-Screen TFT 7" - Microprocessor ARM9 technology	
Available Languages	Italian / English / French / Spanish / German	
Functionality	Reading and recording up to a maximum of 8 RTD Pt 100 probes	
	Selection of the active recording probe with the exclusion of the remaining ones	
	Association of barcodes related to bags related to the air / sample bag temperature trace	
	Possibility to select together with the bar code, the type of bag: large (650ml) or small (260ml)	
	Enabling a clean digital input for synchronizing the start of recording with the start of the unit abatement	
	Enable output on/off switch to stop the cycle of freezing when the pre-set temperature is reached in all pockets connected during the test cycle of freezing data management	
Data Management	SD Card	USB Port
	Ethernet port	Freezing Tracer for reading of cycles/codes
	Installation and configuration of the embedded FTP server on each machine	

#### OPTIONAL ACCESSORIES AVAILABLE ON REQUEST

Door open alarm	Weekly cycle chart disk recorder
RTS System - Bags temperature recorder	Int. T probe for connection to external T recording system