

Kühner SHAKER

LAB-THERM X

THE NEW TABLETOP SHAKING INCUBATOR

The same features and options as the popular Kühner **ISF-1-W** and **ISF-4-W** incubator shakers but on a smaller scale. It fits on top of, or below a laboratory bench, and can be stacked. Made for continuous operation with user-friendly controls and a sturdy, very dependable, smooth-running, whisper quiet D.C. electro-magnetic direct drive. A complete stainless steel interior and the by now, well known, Kühner parallelogram instead of the “prone to breakdown” triple bearings, makes this new **LAB-THERM** the most reliable table top Shaking incubator available.

A 5 year warranty !

shaking
heating
cooling (option)
lighting
humidity (option)
stacking **and**
CO2 (option)



OVER 55 YEARS EXPERIENCE IN BUILDING SHAKERS

LAB-THERM X

EXTREMELY RELIABLE AND WHISPERQUIET

- EX tray 500 x 420 mm
- trouble free drive for continuous shaking of heavy loads
- all stainless steel interior inclusive motor housing, heated water bath for humidity control and finned heater
- superbly foamed insulation
- hermetically sealed double glazing on door
- OPTION: heated double glazed window (humidity control only) to stop condensation
- user-friendly controls. For each parameter it's own control. Set point and actual value of all parameters at a glance
- easy to stack. (2 units) Without use of special stacking gadgets, brackets or tools.
- each machine operates on its own. No shared refrigeration, humidity, Co2 etc.
- energy conscious drive and cooling system
- **swiss made since 1949**



www.kuhner.com

Technical data LT-X	SMX1700	SMX1701	SMX1703
Refrigerator	no	yes *	yes *
Humidity control	no	no	yes
Temperature minimum	ambient + 10°C	ambient - 15°C	ambient - 15°C
Temperature maximum	80°C	80°C	80°C
Humidity maximum	-	-	85 % r.h.
Power consumption	< 800W	< 950W	< 1300W

Machine	
Outside (WxDxH)	850 x 760 x 835mm
Inside (WxDxH)	620 x 670 x 680mm
Volume	280 litre
Weight (with cooling)	100kg
Illumination	Halogen
Operating menu in	English, French, German
Interface, standard	CAN-Bus
Interface, optional	USB, Ethernet, digital, analogue
Ambient temperature	10°C up to 35°C

Temperature		Humidity (SMX1703)	
Setting, digital	0.1°C	max. at 25..55°C	85%r.h.
Accuracy, absolute	± 0.30°C (37°C)	Setting, digital	1% r.h.
Principle of sensor	Pt-100	Accuracy, absolute	+/- 2% r.h.
Power of heating	500W	Principle of sensor	capacitive
Power of cooling *	90...155W	Water refill	automatic
Air circulation	160m3/h	Water heater	180W
		Door heater	90W

Shaking unit		CO2 (SM1034)	
Tray, size	EX (500x420mm)	Principle of sensor	infrared, NDIR
Loading, maximum	25kg	Measuring range	0.....20% CO2
Setting, digital	1 rpm	Setting, digital	0.1%
Accuracy, absolute	± 0.1 rpm	Accuracy, absolute	+/- 0.42% at 20% CO2
Timer	1s ... 999h	Non-linearity	< 0.1%
Acceleration	controlled	Temperature range	5...60°C
Active brake	adjustable	CO2-supply	max. 1 bar overpressure
Stop on position	adjustable		
Shaking motion	Speed		
* orbital, Ø 12.5mm	20...500 rpm		
* orbital, Ø 25.0mm	20...400 rpm		
* orbital, Ø 12.5mm	20...300 rpm		
* linear 12.5mm	20...400 rpm		
* linear 25.5mm	20...300 rpm		
* linear 50.0mm	20...200 rpm		
* can be changed			

Mains:	
SMX 1021:	220-240V / 50-60Hz
SMX 1022:	190-210V / 50-60Hz
SMX 1023:	110-120V / 50-60Hz
SMX 1024:	95-105V / 50-60Hz