

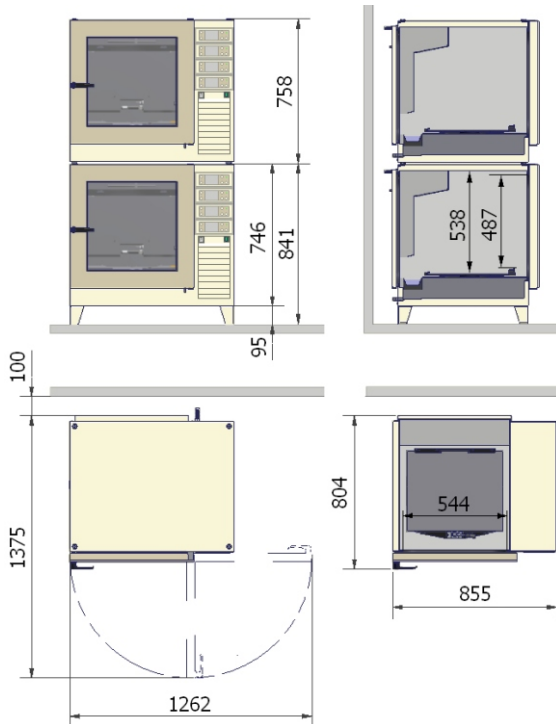
Lab-Therm (LT-X)

Two units of LT-X can be stacked on top of each other, still only occupying the same floor space as one single conventional shaker. **The machine can be equipped with CO₂- and humidity control.** Front opening allows the shaker to be situated and loaded with much more versatility than with a top opening model. Furthermore the high internal space enables the user to shake flasks up to 6L.



Performance Features

- + stackable up to two machines
 - + large capacity on small floor space
 - + humidity control (optional)
 - + CO₂-control (optional)
 - + door switch
 - + heated window* (preventing condensation)
 - + all stainless steel interior (cleaning, disinfection)
 - + maintenance free operation
 - + extremely low energy consumption
 - + precise shaking speed control
 - + at least three adjustable shaking diameters
 - + easy handling due to separate displays and controls
 - + modular electronics with CAN-bus
 - + interface to PC: USB, Ethernet
- * standard in machines with humidity control



subject to change



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Lab-Therm (LT-X)

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

Machine

Outside (WxDxH)	855 x 804 x 841mm, see front page
Inside (WxDxH)	580 x 596 x 538mm
Volume	186 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

Setting, digital	0.1°C
Accuracy, absolute	± 0.30°C (37°C)
Principle of sensor	Pt-100
Power of heating	500W
Power of cooling *	90...155W
Air circulation	160m3/h

Humidity

(SMX1703)

max. at 25..55°C	85% r.h.
Setting, digital	1% r.h.
Accuracy, absolute	± 2% r.h.
Principle of sensor	capacitive
Water refill	automatic
Water heater	180W
Door heater	90W

Shaking unit

Tray, size	EX (500x420mm) E (420x420mm)
Loading, maximum	25kg
Setting, digital	1 rpm
Accuracy, absolute	± 0.1 rpm
Timer	1s ... 999h
Acceleration	controlled
Active brake	adjustable
Stop on position	adjustable

CO₂

(SMX1034)

Principle of sensor	Infrared, NDIR
Measuring range	0...20% CO ₂
Setting, digital	0.1%
Accuracy, absolute	± 0.42% at 20% CO ₂
Non-linearity	< 0.1%
Temperature range	5...60°C
CO ₂ -supply	max. 1 bar overpressure

Shaking motion

Speed	
* orbital, Ø 12.5mm	20...500 rpm
* orbital, Ø 25.0mm	20...400 rpm
* orbital, Ø 50.0mm	20...300 rpm
* can be changed	

* linear motion available

Mains connection

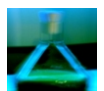
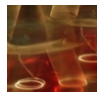
SMX1021:	220 - 240 V / 50-60 Hz
SMX1022:	190 - 210 V / 50-60 Hz
SMX1023:	110 - 120 V / 50-60 Hz
SMX1024:	95 - 105 V / 50-60 Hz

tray size	shake flask size															
	25 mL	50 mL	100 mL	150 mL	200 mL	250 mL	300 mL	500 mL	1000 mL	1500 mL	2000 mL	3000 mL	4000 mL	5000 mL	6000 mL	
E 420x420	81	50	39	30	20	18	15	12	9	5	5	4	2	2	1	
EX 500x420	90	62	42	36	27	22	21	14	9	8	6	4	3	2	2	
EU 420x420	78	39	24	25	20	20	17	12	8	5	4	4	2	2	1	
EXU 500x420	80	45	34	25	23	22	21	15	9	6	5	4	3	2	2	

The number of clamps on universal trays (CU/FU/EXU/EU) is a minimum value. Depending on the producer or country of manufacturing of glass / plastic flasks a higher number of clamps can be mounted on our universal trays.

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Kühner SHAKER