ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Kuhner ISF-1-V* at our website: ***Click HERE***

Climo-Shaker (ISF1-X)

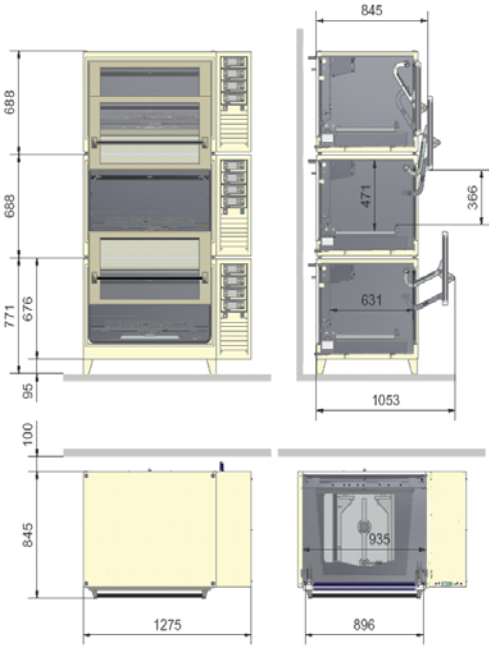
Up to three units of the ISF1-X can be stacked on top of each other, still only occupying the same floor space as one single conventional shaker. Front opening allows the shaker to be situated and loaded with much more versatility than with a top opening model. The door is opened without obstructing the surrounding area.The machine can be equipped with **CO_2- and humidity control**. These features enable the application of the ISF1-X also for cell cultivation. Furthermore the humidity control is important for cultivations in microtiter plates by reducing the evaporation rate. The high shaking speed of the ISF1-X ensures an oxygen unlimited growth of microorganisms.



Performance Features

+ stackable up to three machines
+ large capacity on small floor space
+ humidity control (optional)
+ CO_2-control (optional)
+ door switch
+ heated window* (prevents 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











Adolf Kühner AG, Dinkelbergstrasse 1, CH-4127 Birsfelden (Basel), Switzerland
fon: +41 61 319 93 93, fax: +41 61 319 93 94, www.kuhner.com, office@kuhner.com

subject to change









Kühner SHAKER

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Climo-Shaker (ISF1-X)

Technical data	SMX1500	SMX1501	SMX1503
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	< 1300W	< 1500W	< 2000W

Machine	
Outside (WxDxH)	1275 x 805 x 765mm, see dimensions
Inside (WxDxH)	935 x 631x 471mm
Volume	350 litre
Weight (with cooling)	210kg
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	1000W
Power of cooling *	155...270W
Air circulation	300m^3/h

Shaking unit	
Tray, size	F (800x420mm)
Loading, maximum	25kg
Setting, digital	1 rpm
Accuracy, absolute	± 0.1 rpm
Timer	1s ... 999h
Acceleration	controlled
Active brake	adjustable
Stop on position	adjustable
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	

Humidity	(SMX1503)
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	300W
Door heater	100W

CO_2	(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

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

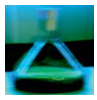
tray size		shake flask size													
		25 mL	50 mL	100 mL	150 mL	200 mL	250 mL	300 mL	500 mL	1000 mL	1500 mL	2000 mL	3000 mL	4000 mL	5000 mL
E	420x420	81	50	39	30	20	18	15	12	9	5	5	4	2	2
EX	500x420	90	62	42	36	27	22	21	14	9	8	6	4	3	2
F	800x420	153	100	74	60	40	40	30	26	16	12	9	8	5	4
EU	420x420	78	39	24	25	20	20	17	12	8	5	4	4	2	2
EXU	500x420	80	45	34	25	23	22	21	15	9	6	5	4	3	2
FU	800x420	109	89	50	50	38	38	34	26	15	12	9	7	5	4

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.

Adolf Kühner AG, Dinkelbergstrasse 1, CH-4127 Birsfelden (Basel), Switzerland
fon: +41 61 319 93 93, fax: +41 61 319 93 94, www.kuhner.com, office@kuhner.com

subject to change



Kuhner SHAKER

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP