Trend setting Laboratory Technology

<u>salvisi*m*i</u>







Laboratory Systems

Tradition

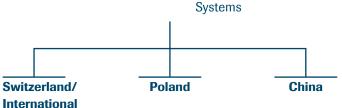
Swiss tradition with a great future

Renggli, founded in 1927, is an established Swiss family enterprise with international orientation in the realm of complete laboratory solutions. As one of the leading European producers and market leader in Switzerland, Renggli designs and implements state-of-the-art laboratories for research, industry, medicine and education. Branch offices in Switzerland, Poland and China, as well as a worldwide presence and innumerable reference installations are evidence that Renggli is a reliable partner covering the entire range of laboratory technology.



Renggli Headquarter, Rotkreuz







Renggli at Bialystok, Poland



Renggli at Yizheng, China





by **renggli**

We design professional laboratory systems for you

Our laboratory systems are among the very best worldwide. We design them for enterprises and institutions with highest requirements in terms of flexibility, quality and precision. In addition to a wide variety of standardized systems, we also design and produce complex customized systems to meet your individual needs.

Our Core Competences

Counselling Competence

Our laboratory experts are eager to support you in all facets of laboratory technology. They will advise you accurately on all pertinent norms, legal provisions and safety aspects.

Planning and Engineering Competence

Our specialists are at your disposal to carry out the planning of the entire project. They even cover the engineering part, from media supply of the individual work place all the way to interfacing with the building control systems.

System Competences

In addition to being a dependable supplier of laboratory installations and equipment, we are your comprehensive one-stop service for counselling, planning/engineering, production, installation and maintenance/service. This is the key and guarantee for decades of perfect performance of your laboratories.

ThermoCenter



The SalvisLab Thermocenter sets standards in quality and design. Short heating and precise temperature control make the Thermocenters true experts in heating and drying tasks. The peculiarity of this multi-functional dry and heat cabinet is in a unique, patented system "everything-in-the-door". Above all, the system guarantees full flexibility in the placement of the interior. Thanks to the touch screen, the operation is even easier and more manageable than before. SwissTEQ in its unique form.

- Improved energy efficiency thanks to our SalvisTEQ Controller
- Compact and flexible thanks to the patented "everything-in-the-door" system
- Programmable independency
- · Real-time clock
- · Safety class 3.3
- USB interface
- Touchscreen
- Standard 6mm entry port

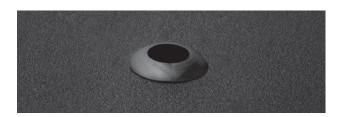


Additional memory
Entry port 20mm
Entry port 40mm
IQ/OQ draft paper, 3 hard copies
Product temperature controller
Program- and user package
Redundant PT-100 probe

Accessories:

Exhaust air adapter
Fresh air filter
Perforated stainless steel shelves
Product temperature probe
Stacking adapter
Stainless steel shelves
Wall bracket
Wire shelves







Thermocenter	TC40	TC100
External dimensions (WxHxD) in mm	460x490x526	570x620x656
Internal dimensions (wxhxd) in mm	340x370x330	450x500x460
Internal volume (I)	40	100
Shelves (standard/max.)	1/8	1/8
Temp. range approx. >5°C oRt to (°C)	200	200
Temp. variation at 50/150 (±°C)	0.4/1.5	0.4/1.7
Temp. fluctuation at 100 (±°C)	0.1	0.1
Heating-up time 70/150 °C (in min.)	10/24	15/35
SalvisTEQ Controller	Yes	Yes
Display	Touch	Touch
Ports	USB, Ethernet	USB, Ethernet

ThermoCenter



The SalvisLab Thermocenter sets standards in quality and design. Short heating and precise temperature control make the Thermocenter an ideal solution for heating and drying tasks of any kind. With the fans and heating elements in the rear part of the housing the Thermocenter guarantees reliability and precision down to the last corner. The clearly arranged touchscreen makes operation even more efficient. SwissTEQ at its best.

- Improved energy efficiency thanks to our SalvisTEQ Controller
- · Unlimited flexibility
- · Real-time clock with process times
- Programmable, automatic restart after power loss
- USB and RJ-45 Interface
- Touchscreen
- Easy cleaning of the chamber
- · Increased capacity of mechanical support
- · Fresh air filter



Additional memory
Additional USB or RJ-45 interface
Entry port 20mm
Entry port 40mm
IQ/OQ draft paper, 3 hard copies
Product temperature controller
Program- and user package
Redundant PT-100 probe
Two freely assignable analog outputs

Accessories:

Exhaust air adapter
Fresh air filter
Perforated stainless steel shelves
Product temperature probe
Stacking adapter
Stainless steel shelves
Wall bracket
Wire shelves









Thermocenter	TC160	TC240	TC400
External dimensions (WxHxD) in mm	800x720x680	890x820x720	990x920x900
Internal dimensions (wxhxd) in mm	535x580x475	625x680x515	725x780x695
Internal volume (I)	160	240	400
Shelves (standard/max.)	2/8	2/8	2/10
Temp. range approx. >5°C oRt to (°C)	275	275	275
Temp. variation at 50/150 (±°C)	0.8/1.8	0.8/2.1	1.0/2.5
Temp. fluctuation at 100 (±°C)	0.2	0.2	0.2
Heating-up time 70/150 °C (in min.)	12/30	16/30	20/40
SalvisTEQ Controller	Yes	Yes	Yes
Display	Touch	Touch	Touch
Ports	USB, Ethernet	USB, Ethernet	USB, Ethernet

VacuCenter



The SalvisLab Vacucenter is the optimal solution for oxidation-sensitive substances and thermally instable products. It provides precise thermal conditions in dust-free vacuum atmosphere. These characteristics enable highly successful SalvisLab Vacucenter applications for a wide range of laboratory applications in areas such as chemical engineering, pharmaceuticals, foodstuffs, cosmetics and electronics. The SalvisLab Vacucenter is renowned for its compact formfactor, reliability and durability. SwissTEQ in its complete form.

- Dynamic regulation and improved energy efficiency thanks to our SalvisTEQ controller
- Precise needle valve ensures a perfectly controlled atmosphere
- · Real-time clock with process times
- Uniform temperature through mantle heating



Additional memory
Calibration certificate
Digital vacuum display
Digital vacuum display & vacuum control by pump
Digital vacuum display & vacuum control by valve
Door seal VITON
IQ/OQ draft paper, 3 hard copies
Product temperature controller
Program- and user package
Redundant PT-100 probe
Solenoid vacuum valve chemical proof
Two freely assignable analog outputs
Vacuum pump connector

Accessories:

Aluminum shelves
Double connector air & inert gas
Light barrier
Product temperature probe
Stainless steel shelves

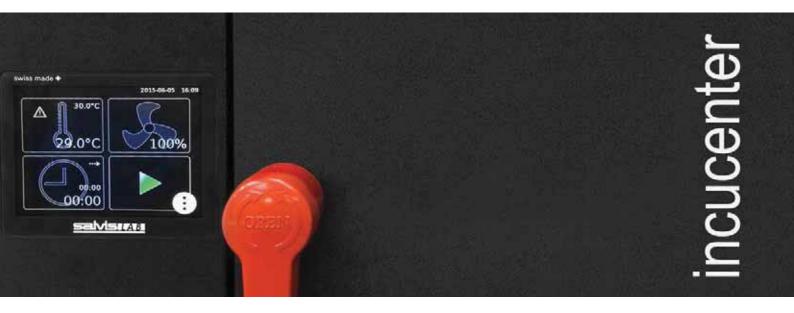






Vacucenter	VC20	VC50
External dimensions (WxHxD) in mm	545x375x425	645x475x525
Internal dimensions (wxhxd) in mm	250x250x320	350x350x420
Internal volume (I)	20	50
Shelves (standard/max.)	1/3	1/5
Temp. range approx. >5°C oRt to (°C)	200	200
Temp. variation at 50/150°C (±°C)	1.0/2.4	1.0/2.6
Temp. fluctuation at 100°C (±°C)	0.2	0.2
SalvisTEQ Controller	Yes	Yes
Display	Touch	Touch
Ports	USB, Ethernet	USB, Ethernet

IncuCenter



SalvisLab Incucenter are highly accurate special apparatus designed for incubation in clinical and industrial laboratory fields as well as for quality control. The exclusive IntelliFan-System from SalvisLab provides uniform, constant level temperature conditions at all locations within the chamber – independent of load. High degree of precision is assured over the full temperature range. The inner door made of safety glass permits optical process monitoring without heat energy loss. SwissTEQ for your incubation processes.

- SalvisTEQ Controller
- · Quick heating and precise temperature control
- · High energy efficiency
- In support of decontamination, the units may be heated up to +110°C.
- · Real-time clock with process times
- · Safety class 3.3
- · Standard 6mm entry port
- · Fresh air filter



Additional memory
Additional USB or RJ-45 interface
Entry port 20mm
Entry port 40mm
IQ/OQ draft paper, 3 hard copies
Product temperature controller
Program- and user package
Redundant PT-100 probe
Two freely assignable analog outputs

Accessories:

Exhaust air adapter
Fresh air filter
Perforated stainless steel shelves
Product temperature probe
Stacking adapter
Stainless steel shelves
Wall bracket
Wire shelves







Incucenter	IC40	IC80	IC160	IC240	IC400
External dimensions (WxHxD) in mm	650x510x510	750x540x600	800x720x680	890x820x720	990x920x900
Internal dimensions (wxhxd) in mm	385x370x305	485x400x395	535x580x475	625x680x515	725x780x695
Internal volume (I)	40	80	160	240	400
Shelves (standard/max.)	2/5	2/5	2/8	2/8	2/10
Temp. range approx. >5°C oRt to (°C)	110	110	110	110	110
Temp. variation at 37/110 (±°C)	0.3/0.8	0.3/0.8	0.5/1.2	0.5/1.8	0.5/2.0
Temp. fluctuation at 37 (±°C)	0.2	0.2	0.2	0.2	0.2
Heating-up time 37 °C (in min.)	10	14	20	26	33
Recovery time (in min.)	3	3	5	5	5
Power (W)	500	800	1000	1200	1200
SalvisTEQ Controller	Yes	Yes	Yes	Yes	Yes
Display	Touch	Touch	Touch	Touch	Touch
Ports	USB, Ethernet				

IncuCenter ICN



SalvisLab Incucenter ICN is our precise natural convection Incubator serie. The ICN is especially designed for the long-term and continuously stable incubation in basic research / research institutes, food and beverage industry as well as microbiology laboratories. The exclusive EasyMenu controller from SalvisLab provides an uniform constant level of temperature conditions at any and all locations within the chamber.

- SalvisTEQ Controller
- Quick and precise temperature regulation
- · Improved energy efficiency
- In support of decontamination, the units may be heated up to $+80^{\circ}\text{C}$.
- · Real-time clock with process times
- Touchscreen
- · Easy and user friendly operation
- · Standard 6mm entry port



Additional memory
Entry port 20mm
Entry port 40mm
IQ/OQ draft paper, 3 hard copies
Product temperature controller
Program- and user package
Redundant PT-100 probe

Accessories:

Exhaust air adapter
Fresh air filter
Perforated stainless steel shelves
Product temperature probe
Stacking adapter
Stainless steel shelves
Wall bracket
Wire shelves





Incucenter ICN	ICN52	ICN118
External dimensions (WxHxD) in mm	460x525x590	570x650x720
Internal dimensions (wxhxd) in mm	340x370x410	450x500x530
Internal volume (I)	52	118
Shelves (standard/max.)	2/8	2/8
Temp. range approx. >5°C oRt to (°C)	80	80
Temp. variation at 37/50°C (±°C)	0.5/0.7	0.5/0.8
Temp. fluctuation at 37/50°C (±°C)	0.1/0.1	0.1/0.2
Heating-up time 37/50°C (min.)	25/50	41/70
Recovery time 37/50°C (door open for 30s, in min.)	6/8	7/9
Power (W)	450	550
Display	Touch	Touch
Ports	USB, Ethernet	USB, Ethernet

WaterBath



The SalvisLab Waterbath is used as a proven aid for reliable temperature control of various samples. The different sizes of the water bath allow a versatile range of applications. The temperature is controlled by a microprocessor with an integrated PID controller. The integrated overtemperature protection provides an additional safeguard against overheating. Swiss quality and design.

- Excellent temperature distribution
- Electronic temperature control
- Easy operation and LED-Display
- Easy cleaning thanks to removable parts



Temperature upgrade 100°C (without circulation pump)

Accessories:

Fresh air filter
Milk bottle rack ø 56/8 holes
Rack for medical hot packs
Test tube rack ø 13/20 holes
Test tube rack ø 18/20 holes
Test tube rack ø 31/5 holes







Waterbath	WB10	WB20	WB40
Temp. range approx. >5°C oRt to (°C)	80	80	80
Temp. variationat 37°C (±°C)	0.1	0.1	0.1
Temp. fluctuation at 37°C (±°C)	0.2	0.2	0.2
Circulating pump	No	Yes	Yes
Bathvolume max. (I)	10	20	40
Bath opening wxd (mm)	251x207	455x265	577x470
Bath depth h (mm)	200	200	200
External dimensions, including lid WxDxH (mm)	577x295x338	779x350x355	905x560x419
Power (W)	1000	1000	2200

BioCenter



The SalvisLab Biocenter is the ideal CO_2 incubator for cell and tissue cultures. The innovative and reliable design concept ensures optimal conditions for your applications. The selected temperature control technology operates without any ventilation inside the chamber, thus reducing the risk of contamination to a minimum. Constant conditions for temperature, CO_2 and humidity are kept independent from the load.

- · Easy touchscreen control
- Decontamination at 200°C
- Temperature uniformity is achieved by heating the chamber from all six sides
- Infrared CO₂ probe
- Export process data to an SD card
- · Sealing inner glass door
- Standard 25mm entry port



1-19% oxygen control
Alarm contact
Chamber power supply (IP66)
Entry port 25mm
Ethernet Port
Inner glass door, 8 compartments (BC190)
Inner glass door, 6 compartments (BC50)
Log Software BC190

Accessories:

Automatic CO_2 cylinder change over unit (external) CO_2 Filter (pack of two) In-line CO_2 reducing valve with pressure gauge (2-30 p.s.i.) Perforated stainless steel shelves SD memory card Stacking kit & stand, with castors Stacking kit (no stand) Stand (no stacking kit) with four castors Two stage CO_2 regulator









Biocenter	BC50	BC190
External dimensions (WxHxD) in mm	535x705x430	850x765x600
Internal dimensions (wxhxd) in mm	400x400x305	685x630x435
Internal volume (I)	50	190
Shelves (standard/max.)	3	4/8
Temp. range approx. >5°C oRt to (°C)	60	60
Temp. variation at 37°C (±°C)	0.2	0.25
Temp. fluctuation at 37°C (±°C)	0.1	0.1
CO ₂ range (%)	0.2 – 20	0.2 - 20
CO ₂ variation (±%)	0.2	0.2
CO ₂ fluctuation (±%)	0.2	0.2
CO ₂ recovery time 37°C (door open for 30s, %/min.)	> 0.7	> 0.7
Waterbath (I)	1.5	1
Relative humidity 37°C (%)	< 95	< 95
Voltage (±10%) 50/60 Hz	230	230
Ethernet port	Optional	Optional
Entry port (25 mm)	Yes	Yes
O ₂ 1-19% Control	No	Optional

CoolingCenter



SalvisLab Coolingcenter CIC150 is our solution for cooled incubation processes. Coolingcenter stands for incubation of microbiological cultures and for reproducible results in every routine test in the laboratory - especially by high batch througtputs during long-term operation. The CIC is built to last, in typical SalvisLab Swiss Quality. The exclusive EasyMenu controller from SalvisLab provides an uniform and constant level of temperature conditions at any and all location within the chamber. SwissTEQ, what else.

- SalvisTEQ Controller
- · Precise temperature control
- · High energy efficiency
- · Real-time clock with process times
- Touchscreen
- Easy and user friendly operation



Additional memory
Calibration certificate
IQ/OQ draft paper, 3 hard copies
Product temperature controller
Program- and user package
Redundant PT-100 probe

Accessories:

Wire shelves





CIC150

Coolingcenter CIC

External dimensions (WxHxD) in mm 685x860x755 Internal dimensions (wxhxd) in mm 490x495x595 Internal volume (I) 150 Shelves (standard/max.) 2/13 Weight (kg) 75 Temp. range (°C) +5 to +60 Temp. variation at 5/25/37°C (±°C) 0.4/0.4/0.4 Temp. fluctuation at 5/25/37°C (±°C) 0.1/0.1/0.1 Heating-up time 23°C to 37 °C (in min.) 5 Recovery time 37/50°C 5/25/37°C (door open for 30s, in min.) 2/1/4 Voltage (±10%) 50/60 Hz (V) 230/115 Heating power (W) 900 Cooling power at 20°C (W) 200 Idle power consumption 20/37°C (W) 370/60 R134a Coolant SalvisTEQ Controller Yes Display Touch USB, Ethernet Ports

Cleaner



SalvisLab laboratory glass cleaning machines are the ideal solution for the treatment of dirty glassware. They were designed as a under-bench or as free-standing model. Quiet and efficient washing is possible simultaneously on two independent levels. Through constant innovation our laboratory glass cleaning machines meet the highest level of development and guarantee constant reproducible cleaning results. SalvisLab guarantees great flexibility, compatibility and individuality in the selection of the washing baskets. All of our cleaning machines are made of stainless steel.

- Efficient washing or drying with jet pipe racks on two levels
- Individually configurable jet pipe racks
- Direct coupling of the jet pipe racks on the rear wall
- Temperature control through two independant sensors (PT 1000)
- · Two dosing pumps
- LCD-Display
- 20 pre-programmed cycles and 20 custom, user programmable cycles
- USB interface



Washers and Dryers	SCD1160	SCD1190	SCD G60
External dimensions (WxHxD) in mm	600x850x630	900x850x630	600x850x630
Internal volume (I)	171	171	171
Voltage +/- 10% (V/kW)	400/5.6	400/5.6	400/5.6
Storage compartment for liquid detergent	No	Yes	No
Max. washing/drying temperature (°C)	93	93	93
Dosing pump (standard/optional)	2/1	2/1	2/1
Air filter (optional HEPA)	Class 5F (H14)	Class 5F (H14)	Class 5F (H14)
Recirculation pump (I/min)	400	400	400
Air capacity of dryer (m³/h)	150	150	150

SD1060

Washer	SC1160		
External dimensions (WxHxD) in mm	600x850x630		
Internal volume (I)	171		
Voltage +/- 10 % (V/kW)	400/5.6		
Storage compartment for liquid detergent	No		
Max. washing temperature °C	93		
Dosing pump (standard/optional)	2/1	4	
Recirculation pump (I/min)	400	- 1	



External dimensions (WxHxD) in mm	600x850x630
Internal volume (I)	171
Voltage +/- 10% (V/kW)	230/2.0
Drying programs (standard/custom)	2/1
Max. drying temperature (°C)	85
Drying power (kW)	1.5
Air capacity of dryer (m³/h)	150

Dryer



HeatingCenter



SalvisLab Heatingcenter HC 120 is a heating cabinet especially designed for hospitals, nursing homes, spa's and fitness centres. A multitalent to warm up towels, scrubs, baby bottles and bath towels, etc.







Heatingcenter

External dimensions (WxHxD) in mm
Internal dimensions (wxhxd) in mm
Internal volume (L)
Shelves
Temp. range 10°C oRt to (°C)
Idle power consumption at 50°C (W)

HC120

MixCenter



SalvisLab Mixcenter assist you in daily laboratory work with the appropriate device. The magnetic stirrer is available in a classic and in a digital version, both versions can be heated. Even thermally demanding tasks can be mastered easily.

- · Precise temperature control
- Ideal for thermally demanding tasks
- PC-Control



flask

flask

flask

Carrying plate, blue
External PT-1000 temperature probe
Fixed ring, blue
Quarter pie, black
Quarter pie, blue
Quarter pie, gold
Quarter pie, green
Quarter pie, purple
Quarter pie, red
Support clamp for PT-1000
Reaction block for 50ml round bottom
flask
Reaction block for 100ml round bottom

Reaction block for 250ml round bottom

Reaction block for 500ml round bottom

Stirrer bar (10mm x 6mm)
Stirrer bar (15mm x 8mm)
Stirrer bar (20mm x 8mm)
Stirrer bar (25mm x 8mm)
Stirrer bar (30mm x 6mm)
Stirrer bar (40mm x 8mm)
Stirrer bar (50mm x 8mm)
Stirrer bar (65mm x 8mm)
Stirrer bar (80mm x 13mm)
Stirrer bar remover



Wire shelves



Mixcenter	MC35	MC350
Voltage (V)	200-240	200-240
Power (W)	530	550
Max. stirring Volume (I H2O)	20	20
Plate (Ø mm)	135	135
Plate material	Ceramic coated	Ceramic coated
Speed	0-1500	100-1500
Speed adjustment	analog	digital
Temp. range approx. >5°C oRt to (°C)	350	350
RS-232 port	No	Yes
Safety class	IP 42	IP 42

Rotkreuz

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