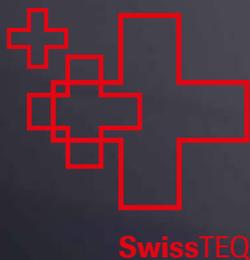


Trend setting Laboratory Technology.



About SalvisLab.

Swiss tradition with a great future

SalvisLab, 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 manufacturers and market leaders in Switzerland, Renggli designs and implements state-of-the-art laboratories for research, industry, medicine and education.

With the renowned SalvisLab trademark, Renggli develops and produces a range of drying- and vacuum ovens, incubators, CO₂ incubators, heating cabinets, water baths and laboratory cleaning machines. SalvisLab products are distributed world-wide through our international network of dealers.

We design professional equipment systems for you

SalvisLab develops and distributes high-quality laboratory equipment in close collaboration with the complete laboratory solutions provider Renggli AG in Rotkreuz. SalvisLab sets standards in quality, design and the production of laboratory equipment. New developments undergo intensive testing in our Development Center, so that they meet our customers' requirements.

The comprehensive range of equipment offered by SalvisLab provides extensive coverage of requirements in the laboratory field with forced air drying ovens, incubators, vacuum drying ovens, heating cabinets, water baths, glassware cleaners and the corresponding accessories for each appliance. The new SalvisTEQ controller sets new benchmarks in modern laboratory equipment and has equipment-specific options for individual needs in addition to the standardized functions.

With our well-trained team, we offer you comprehensive advice on our equipment as well as reliable on-site service. Our collaboration with partners means there is an extensive global network to meet all needs in the laboratory field and we are also in a position to provide you with support extending beyond individual items of equipment, both as a consultant and an intermediary.

Our Core Competences

Counselling Competence

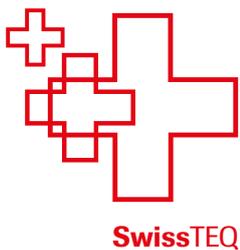
Our laboratory experts are eager to support you in all facets of laboratory technology. They will advise you accurately on all pertinent norms, legal provisions and safety aspects.

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.



SalvisTEQ controller.

«SalvisTEQ looks ahead, thinks for itself and adapts, and does so at every stage of the process.»

The new Model Predictive controller and a high-resolution color touch screen once again make SalvisLab a pioneer in trend-setting laboratory technology.

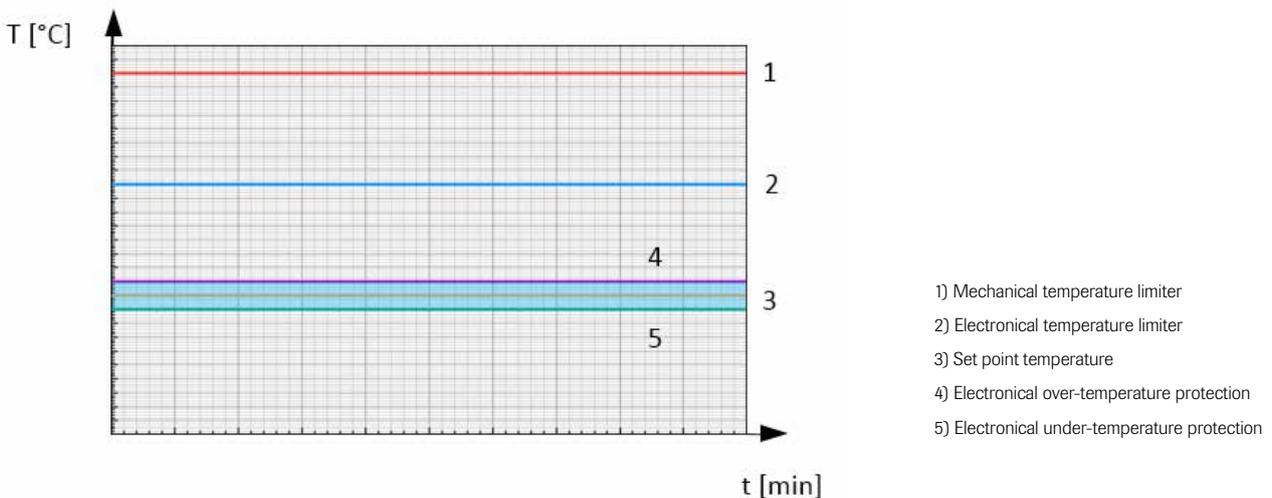
A SalvisTEQ controller monitors and registers the historical progression of process variables. With the predictive controller which was developed in house, we use equipment-specific process models of dynamic behavior, which means the controller knows at all times what it has done, where exactly it is, where it wants to go and how it can achieve the outcome in the most efficient way.

The advantages of the SalvisTEQ controller are very clear in comparison to PID controllers normally used in the sector:

- shorter heating-up times
- dynamic control behavior
- no dead or waiting times
- higher precision

Safety class 3.3

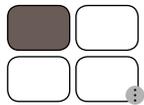
SalvisLab has upgraded the safety of the controller. All SalvisTEQ controllers are in safety class 3.3 as standard, which means they have lower and upper temperature limit protection.





Operation

SalvisLab has stayed true to itself in terms of the operation of the SalvisTEQ controller. The touch screen is clearly laid out and intuitive to operate.



Real-time temperature monitoring during the heating-up phase (TC/VC)

Temperature settings:

- Selection of the sensor for temperature measurement (internal/external)**
- Set-point temperature
- Gradient (only for linear heating process)
- Actual temperature



Real-time pressure monitoring during the heating-up phase (VC) or fan control (TC)

Settings depending on the equipment:

- Vacuum On/Off (VC)
- Fan (fan speed, adjustable between 40/60 and 100 %, depending on the equipment)
- Ventilation flap (opening width, adjustable between 0 and 100 %)*
- Pressure (target pressure, adjustable between 0.1 and 999.9 mbar and hysteresis)**



Real-time process duration

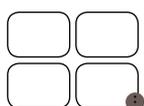
Time settings:

- Start in
- Start at (start at specified time)
- Hold for (heating up and holding of the set-point temperature for a specified time)



Play key

- Start/stop of the heating process with the selected settings
- Real-time display of process parameters (temperature, pressure and fan speed)**



Menu/Stop

* Available from 2017

** Option

SalvisTEQ standard functions

Self-check	SalvisTEQ checks itself for hardware and software errors on every boot.
Sterilization according to WHO	This standard technology enables sterilization of the chamber according to WHO guidelines.
°C or °F	Easy switching of the temperature measurement unit.
Time	Real time clock.
Automatic restart	Set the devices behavior on power outage: Restart, stop or continue the running program at the exact point it was stopped.
Heating	Reach the temperature set as quick as possible or follow a certain gradient while heating.
Logbook	Every change of settings or process parameters is being recorded in the logbook.
Internal storage	SalvisTEQ comes with 20 MB of internal storage.
Calibration	All SalvisLab products have 2-point factory calibration ex works.
Reference temperature	With an additional PT-100 sensor built in as standard, the SalvisTEQ controller measures the ambient temperature.
Alarms	Acoustic and visual alarms.
Info	Display of software version and serial number as well as QR code for downloading the user manual.
Connections	Standard USB and RJ45 connections at the front.

SalvisTEQ options

Vacuum display	Digital display and logging of the actual vacuum.
Vacuum control	The controller controls the vacuum via the vacuum valve with set-point and hysteresis.
Vacuum and ventilation control	In addition to vacuum control, ventilation is also automatically controlled.
Programmable power socket	Programmable power socket, which for example enables connection of the vacuum pump.
Extended programs	Programs with up to 1500 programmable steps (Extension of programs via USB stick).
Users	Set individual permissions for every user.
Redundancy PT-100	Increased safety by using a redundant PT-100 probe.
Product temperature controller	The «product temperature controller» option enables you to adjust the holding temperature with an external product temperature sensor.
Ports	Additional USB or RJ45 ports are possible.
+ point calibration	As an option to the factory-based 2-point calibration, up to a 10-point calibration can be carried out.
Storage extension	Internal storage can be extended up to 32GB.
Process graph	Process graph can be viewed live on the display or exported to a USB flash drive.
Calendar/Scheduler	Schedule your programs to automatically run and repeat.



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 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
- Touch screen
- Standard 6mm entry port
- Ambient temperature probe



Options

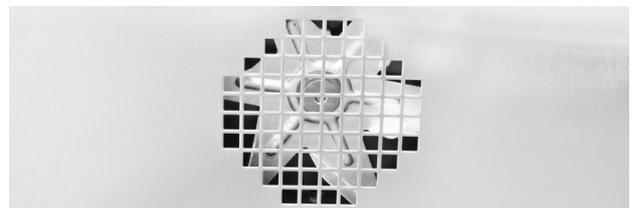
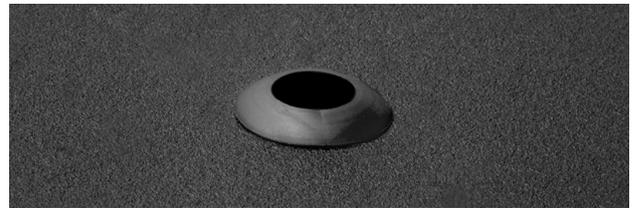
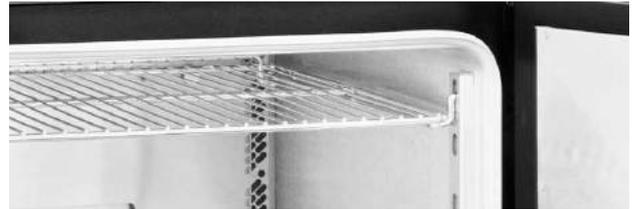
Product temperature controller
 Program- and user package
 Process graph
 Redundant PT-100 probe
 Factory temperature mapping
 LAN-Interface
 Additional memory
 Entry port 20 mm
 Entry port 40 mm
 IQ/OQ draft paper, 3 hard copiest
 + point calibration

Accessories

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

Technical specifications

External dimensions (WxHxD) in mm
 Internal dimensions (WxHxD) in mm
 Internal volume (l)
 Shelves (standard/max.)
 Temp. range approx. $>5^{\circ}\text{C}$ oRt to $(^{\circ}\text{C})$
 Temp. variation at 50/150 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)
 Temp. fluctuation at 100 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)
 Heating-up time 70/150 $^{\circ}\text{C}$ (in min.)
 SalvisTEQ Controller
 Display
 Ports



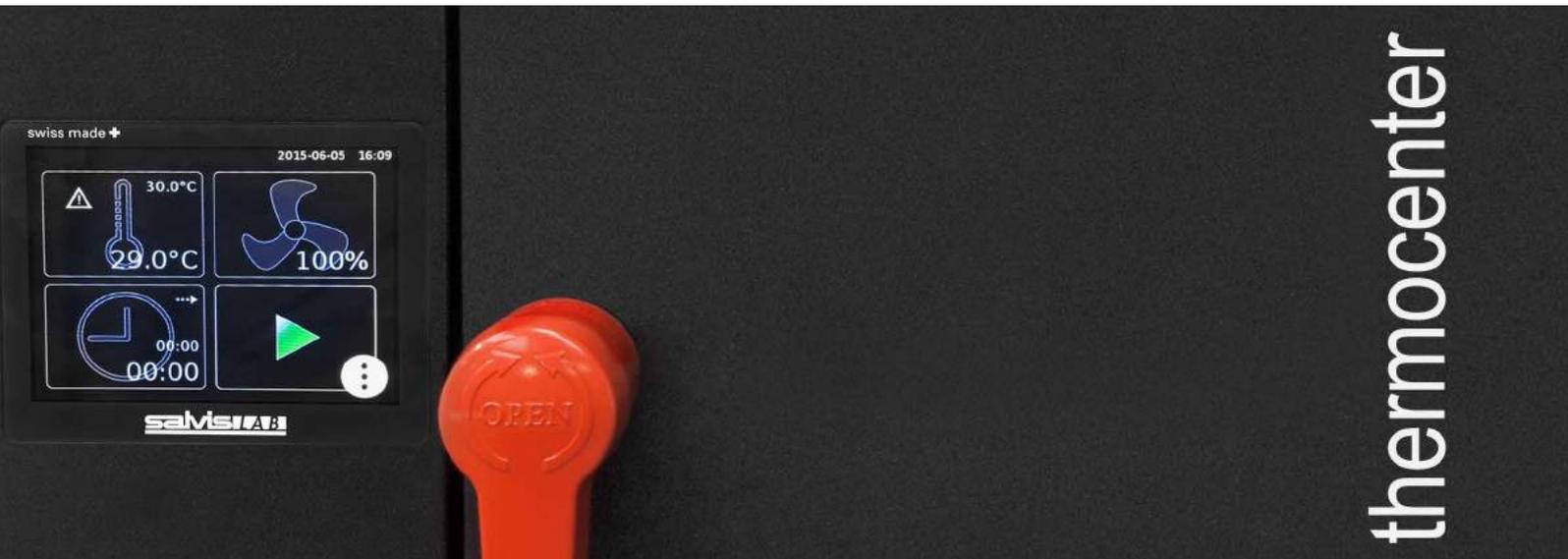
TC40

460x490x526
 340x370x330
 40
 1/8
 200
 0.4/1.5
 0.1
 10/24
 Yes
 Touch
 USB, RJ45

TC100

570x620x656
 450x500x460
 100
 1/8
 200
 0.4/1.7
 0.1
 15/35
 Yes
 Touch
 USB, RJ45

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 touch screen 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
- Safety class 3.3
- Programmable, automatic restart after power loss
- USB and RJ45 Interface
- Touch screen
- Easy cleaning of the chamber
- Increased capacity of mechanical support
- Fresh air filter
- Ambient temperature probe

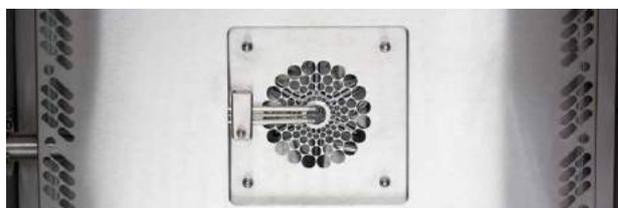


Options

Product temperature controller
 Program- and user package
 Process graph
 Redundant PT-100 probe
 Factory temperature mapping
 LAN-Interface
 Additional memory
 Additional USB or RJ45 port
 Entry port 20 mm
 Entry port 40 mm
 IQ/OQ draft paper, 3 hard copies
 Freely assignable analog outputs
 Programmable power socket
 + point calibration

Accessories

Wire shelves (standard)
 Fresh air filter
 Product temperature probe
 Wall bracket



Technical specifications

External dimensions (WxHxD) in mm
 Internal dimensions (WxHxD) in mm
 Internal volume (l)
 Shelves (standard/max.)
 Temp. range approx. $>5^{\circ}\text{C}$ oRt to $(^{\circ}\text{C})$
 Temp. variation at 50/150 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)
 Temp. fluctuation at 100 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)
 Heating-up time 70/150 $^{\circ}\text{C}$ (in min.)
 SalvisTEQ Controller
 Display
 Ports

TC160	TC240	TC400
800x720x680	890x820x720	990x920x900
535x580x475	625x680x515	725x780x695
160	240	400
2/8	2/8	2/10
275	275	275
0.8/1.8	0.8/2.1	1.0/2.5
0.2	0.2	0.2
12/30	16/30	20/40
Yes	Yes	Yes
Touch	Touch	Touch
USB, RJ45	USB, RJ45	USB, RJ45

Vacucenter.



ucenter

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 pressurizing
- Real-time clock with process times
- Uniform temperature through mantle heating
- Ambient temperature probe
- Safety class 3.3
- USB interface
- Touch screen
- Standard DN25 entry port



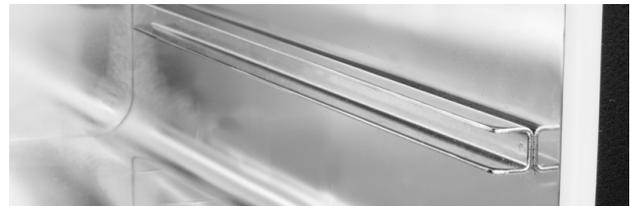
Options

Digital vacuum display
 Digital vacuum display & vacuum control
 Digital vacuum display, vacuum control & ventilation control
 Product temperature controller
 Program- and user package
 Process graph
 Redundant PT-100 probe
 Factory temperature mapping
 Additional memory
 IQ/OQ draft paper, 3 hard copies
 Solenoid vacuum valve chemical proof
 Freely assignable analog outputs
 Programmable power socket
 + point calibration (max. 10 points)



Accessories

Stainless steel shelves
 Aluminum shelves
 Double connector air & inert gas
 Light barrier
 Product temperature probe PT-100
 Vacuum pump connector DN16



Technical specifications

External dimensions (WxHxD) in mm
 Internal dimensions (WxHxD) in mm
 Internal volume (l)
 Shelves (standard/max.)
 Temp. range approx. $>5^{\circ}\text{C}$ oRt to $(^{\circ}\text{C})$
 Temp. variation at 50/150 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)
 Temp. fluctuation at 100 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)
 SalvisTEQ Controller
 Display
 Ports

	VC20	VC50
External dimensions (WxHxD) in mm	545x375x425	645x475x525
Internal dimensions (WxHxD) in mm	250x250x320	350x350x420
Internal volume (l)	20	50
Shelves (standard/max.)	1/3	1/5
Temp. range approx. $>5^{\circ}\text{C}$ oRt to $(^{\circ}\text{C})$	200	200
Temp. variation at 50/150 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)	1.0/2.4	1.0/2.6
Temp. fluctuation at 100 $^{\circ}\text{C}$ ($\pm^{\circ}\text{C}$)	0.2	0.2
SalvisTEQ Controller	Yes	Yes
Display	Touch	Touch
Ports	USB, RJ45	USB, RJ45

Incucenter.



incucenter

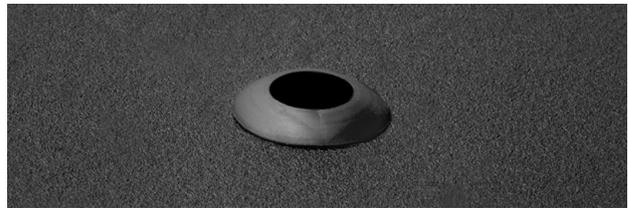
SalvisLab Incucenter are highly accurate apparatus designed for incubation in clinical and industrial laboratory fields as well as for quality control. The exclusive Intelli-Fan-System from SalvisLab provides uniform, constant level temperature conditions at all locations within the chamber – independent 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 6 mm entry port
- Fresh air filter
- Ambient temperature probe



Options

Product temperature controller
 Program- and user package
 Process graph
 Redundant PT-100 probe
 Factory temperature mapping
 LAN-Interface
 Additional memory
 Additional USB or RJ45 interface
 Entry port 20 mm
 Entry port 40 mm
 IQ/OQ draft paper, 3 hard copies
 Two freely assignable analog outputs
 Programmable power socket
 + point calibration



Accessories

Wire shelves (standard)
 Fresh air filter
 Product temperature probe PT-100



Technical specifications

	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 (l)	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 (± °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 (± °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, RJ45	USB, RJ45	USB, RJ45	USB, RJ45	USB, RJ45

BioCenter.



The SalvisLab BioCenter is the ideal CO₂ 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, CO₂ 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
- Safety class 3.1

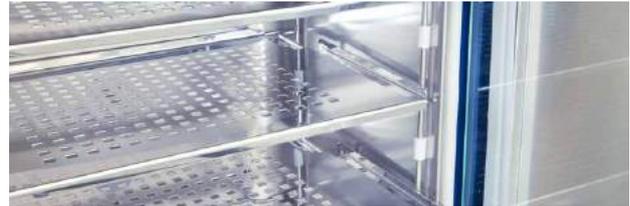


Options

- 1 – 19 % O₂-control
- Log Software
- Entry port 25 mm
- RJ45 Port
- Alarm contact
- Inner glass door, 8 compartments (BC190)
- Inner glass door, 6 compartments (BC50)

Accessories

- Perforated stainless steel shelves
- Stacking kit & stand, with castors
- Stacking kit (no stand)
- Stand (no stacking kit) with four castors
- Automatic CO₂ cylinder change over unit (external)
- CO₂ Filter (pack of two)
- In-line CO₂ reducing valve with pressure gauge (2–30 p.s.i.)
- Two stage CO₂ regulator
- SD memory card



Technical specifications

- External dimensions (WxHxD) in mm
- Internal dimensions (WxHxD) in mm
- Internal volume (l)
- Shelves (standard/max.)
- Temp. range approx. >5 °C oRt to (°C)
- Temp. variation at 37 °C (± °C)
- Temp. fluctuation at 37 °C (± °C)
- CO₂ range (%)
- CO₂ variation (± %)
- CO₂ fluctuation (± %)
- CO₂ recovery time 37 °C (door open for 30 s, %/min.)
- Waterbath (l)
- Relative humidity 37 °C (%)
- Voltage (±10 %) 50/60 Hz
- Ethernet port
- Entry port (25 mm)
- O₂ 1 – 19 % Control

	BC50	BC190
External dimensions (WxHxD) in mm	535x705x430	850x765x600
Internal dimensions (WxHxD) in mm	400x400x305	685x630x435
Internal volume (l)	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 30 s, %/min.)	>0.7	>0.7
Waterbath (l)	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 throughputs 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.

- Precise temperature control
- High energy efficiency
- Real-time clock
- Easy menu controller
- Easy and user friendly operation
- Safety class 3.1
- Ambient temperature probe
- Compressor cooled



Options

Factory temperature mapping
IQ/OQ draft paper, 3 hard copies

Accessories

Wire shelves



Technical specifications

External dimensions (WxHxD) in mm
Internal dimensions (WxHxD) in mm
Internal volume (l)
Shelves (standard/max.)
Weight (kg)
Temp. range (°C)
Temp. variation at 5/25/37°C (\pm °C)
Temp. fluctuation at 5/25/37°C (\pm °C)
Heating-up time 23°C to 37°C (in min.)
Recovery time 37/50°C 5/25/37°C (door open for 30 s, in min.)
Voltage (\pm 10%) 50/60 Hz (V)
Heating power (W)
Cooling power at 20°C (W)
Idle power consumption 20/37°C (W)
Coolant
Controller
Display
Ports

CIC150

685x860x755
490x495x595
150
2/13
75
+5 to +60
0.4/0.4/0.4
0.1/0.1/0.1
5
2/1/4
230/115
900
200
370/60
R134a
LCD
LCD
RS 232

Heatingcenter.



The HC 120 heating cabinet was specially developed and manufactured for the care and surgical sector, traumatology, intensive care units, baby units, maternity wards, old-age and care homes, therapy units, physiotherapy, wellness areas, etc. The housing is made of heavy-duty, powder-coated steel, while the interior is entirely manufactured from electropolished stainless steel and has all-round insulation and sealing. The temperature can be continuously and precisely adjusted, ambient temperature +5°C to +80°C, using the control thermostat and the analog display. The door locking mechanism is equipped with two magnetic fasteners in order to ensure secure closure of the doors. Excellent materials and good insulation guarantee low operating costs. The HC 120 heating cabinet is designed for continuous operation.

The heating cabinet is used to keep the following warm:

- Bedding
- Surgical drapes
- Wraparound garments/bath towels
- Infusion solutions
- Baby bottles
- etc.





Technical specifications

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

550x760x500

480x610x435

120

2

80

65

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



Options

Carrying plate, blue
 Fixed ring, blue
 Quarter pie, black
 Quarter pie, blue
 Quarter pie, gold
 Quarter pie, green
 Quarter pie, purple
 Quarter pie, red
 Reaction block for 50 ml*
 Reaction block for 100 ml*
 Reaction block for 250 ml*
 External PT1000 temp. probe
 Support clamp for PT-1000

Accessories

Reaction block for 500 ml
 Stirrer bar (10 mm x 6 mm)
 Stirrer bar (15 mm x 8 mm)
 Stirrer bar (20 mm x 8 mm)
 Stirrer bar (25 mm x 8 mm)
 Stirrer bar (30 mm x 6 mm)
 Stirrer bar (40 mm x 8 mm)
 Stirrer bar (50 mm x 8 mm)
 Stirrer bar (65 mm x 8 mm)
 Stirrer bar (80 mm x 13 mm)
 Stirrer bar remover



Technical specifications

Voltage (V)
 Power (W)
 Max. stirring Volume (l H₂O)
 Plate (Ø mm)
 Plate material
 Speed
 Speed adjustment
 Temp. range approx. >5°C oRt to (°C)
 RS-232 port
 Safety class

MC35

200 – 240
 530
 20
 135
 Ceramic coated
 0 – 1500
 analog
 350
 No
 IP 42

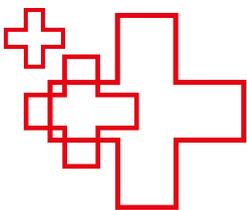
MC350

200 – 240
 550
 20
 135
 Ceramic coated
 100 – 1500
 digital
 350
 Yes
 IP 42

*round bottom flask

Manufacturer:

Renggli AG
SalvisLab
Industrie-Ost
CH-6343 Rotkreuz
Switzerland
www.salvislab.com



SwissTEQ



renggli

Laboratory
Systems