

Příloha č. 1 Kupní smlouvy č. 9770/ 00072

Počet stran: 34.

Příloha č. 1: Technická specifikace

Podrobná technická specifikace dodávky

Uchazeč přiloží příslušný list s vyplněnou tabulkou – viz část č. 2 zadávací dokumentace „Technické podmínky“.

Technická specifikace musí být v souladu s „Technickými podmínkami“. Uchazeč odpovídá za řádně zpracovanou technickou specifikaci, která tvoří přílohu č. 1 kupní smlouvy.

Příloha č. 1 - Technické podmínky pro část 1 - konfigurace 1

Typové označení přístroje

1 ks MCO-170AICUVH-PE (Panasonic) s příslušenstvím (1 ks generátor MCO-HP-PW, 1 ks redukční ventil)

Základní požadavky zadavatele

Zadavatel požaduje dodávku CO2 inkubátoru

Požadované technické a funkční vlastnosti <i>(nabídka uchazečů musí splňovat všechny níže uvedené parametry.)</i>	Požadovaná hodnota	Nabídka uchazeče <i>(Pokud je zadavatelem u daného parametru požadován číselný údaj, je na uchazeč povinen uvést, v opačném případě bude zadavatel vycházet z jím minimální stanovené hodnoty - viz. sloupec Požadovaná hodnota.)</i>
kultivace tkáňových kultur	ano	ANO
vnitřní objem inkubátoru	140 - 170 litrů	ANO 165 litrů
přirozená nebo nucená cirkulace vzduchu	ano	ANO nucená cirkulace
vysokoteplotní nebo chemická (H2O2) dekontaminace	ano	ANO H2O2 dekontaminace včetně generátoru par H ₂ O 2
perforované police z nerezové oceli, stavitelná rozteč polic s možností vysouvání	min. 3	dle dodatečné informace: perforované police ze slitiny mědi a nerez, které se mohou posouvat, umísťovat a vysouvat v rozsahu prolisů pro uchycení (10 poloh)
teplotní senzor	ano	ANO
teplotní přesnost	max. +/- 0.5 °C	ANO
přímý ohřev ve stěnách a dveřích	ano	ANO
CO2 rozmezí	nejméně 0.2 – 20%	ANO
přesnost nastavení obsahu CO2, autokalibrace	max. +/- 0,2%	ANO
CO2 IR senzor	ano	ANO duální IR senzor
0.22 µm HEPA filtr na vstupu přívodu plynu do inkubátoru pro zajištění sterility	ano	ANO
vnitřní prosklené dveře, vnější plně dveře	ano	ANO
relativní vlhkost	nejméně 90% RH při +37°C	ANO 95% +/- 5%
přirozené nebo aktivní zvlhčování vzduchu z vnitřního odpařovače	ano	ANO uvnitř inkubátoru miska na vodu
optoakustický alarm systém: teplotní, CO2 a otevření dveří	ano	ANO
dvoustupňový redukční ventil pro CO2	ano	ANO součástí příslušenství
vnitřní bezspárová komora, porolisy pro uchycení polic, oblé rohy	ano	ANO
příkon	max. 1000 W	ANO 500 W
zabudovaná uv lampa pro dekontaminaci vnitřního prostoru	ano	ANO součástí
digitální displej umožňující nastavení / zobrazení parametrů (teplota, koncentrace CO ₂) a možnost stažení dat pře usb	ano	ANO

Prodávající (uchazeč) prohlašuje, že dodávka bude vyhovovat všem výše uvedeným požadavkům Kupujícího (zadavatele). Pokud by se v průběhu přípravy a realizace dodávky ukázalo, že ke splnění požadavků Kupujícího dle této přílohy je nezbytné dodání dalších zařízení, součástí či příslušenství nebo provedení dalších služeb či prací, zavazuje se Proávající dodat tato zařízení a provést tyto práce či služby jako součást plnění dodávky dle smlouvy bez zvýšení Kupní ceny (zminěné dodávky, práce či služby nebudou mít charakter vicedodávek či víceprací).

Ing. Pavel Břicháček, jednatel

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148 00 Praha 4 - Kunratice@

Příloha č. 1 - Technické podmínky pro část 1 - konfigurace 2

Typové označení přístroje

1 ks MCO-170AICUVH-PE (Panasonic) s příslušenstvím (1 ks MCO-HP-PW generátor, 1 ks redukční ventil)

Základní požadavky zadavatele

Zadavatel požaduje dodávku CO2 inkubátoru

Požadované technické a funkční vlastnosti (nabídka uchazeče musí splňovat všechny níže uvedené parametry)	Požadovaná hodnota	Nabídka uchazeče (Pokud je zadavatelem u daného parametru požadován číselný údaj, je ho uchazeč povinen uvést, v opačném případě bude zadavatel vzet do et z jím minimální součtové hodnoty - viz sloupec Požadovaná hodnota)
kultivace tkáňových kultur	ano	ANO
systém musí odpovídat platným CSN a EN aplikovatelným pro zařízení daného účelu, RoHS compliant (nepřítomnost nebezpečných látek jako je Pb, Hg, Cr, Cd, PBB, PBDE atd).	ano	ANO
vnitřní objem inkubátoru	100 - 170 litrů	ANO 165 litrů
přirozená nebo nucená cirkulace vzduchu	ano	ANO nucená cirkulace
vysokoteplotní nebo chemická (H2O2) dekontaminace	ano	ANO H2O2 dekontaminace včetně generátoru par H2O2
perforované police z nerezové oceli, stavitelná rozteč polic s možností vysouvání	min. 3	ANO 4 ks
teplotní senzor	ano	ANO
teplotní nastavení inkubace v rozsahu	25°C - 40°C	dle dodatečné informace: teplotní nastavení: teplota okolí + 5°C až + 50°C
teplotní přesnost	max. +/- 0,3 °C	ANO
přímý ohřev ve stěnách a dveřích	ano	ANO
CO2 rozmezí	nejméně 0,2 – 20%	ANO
přesnost nastavení obsahu CO2, autokalibrace	max. +/- 0,2%	ANO
CO2 IR senzor	ano	ANO duální IR senzor
0,22 µM HEPA filtr na vstupu přívodu plynu pro zajištění sterility	ano	ANO
vnitřní prosklené dveře hermeticky těsněné, vnější plně dveře	ano	ANO
relativní vlhkost	nejméně 90% RH při +37°C	ANO 95% +/- 5%
přirozené nebo aktivní zvlhčování vzduchu z vnitřního odpařovače	ano	ANO uvnitř inkubátoru miska na vodu
optoakustický alarm systém: teplotní, CO2 a otevření dveří	ano	ANO
dvoustupňový redukční ventil pro CO2	ano	ANO součástí příslušenství
vnitřní bezspárová komora, oblé rohy	ano	ANO
příkon	max. 1000 W	ANO 500 W
digitální displej umožňující nastavení / zobrazení parametrů (teplota, koncentrace CO2)	ano	ANO

Prodávající (uchazeč) prohlašuje, že dodávka bude vyhovovat všem výše uvedeným požadavkům Kupujícího (zadavatele). Pokud by se v průběhu přípravy a realizace dodávky ukázalo, že ke splnění požadavků Kupujícího dle této přílohy je nezbytné dodání dalších zařízení, součástí či příslušenství nebo provedení dalších služeb či prací, zavazuje se Proávající dodat tato zařízení a provést tyto práce či služby jako součást plnění dodávky dle smlouvy bez zvýšení Kupní ceny (zmíněné dodávky, práce či služby nebudou mít charakter vícedodávek či víceprací).

Ing. Pavel Břicháček, jednatel

SCHOELLER INSTRUMENTS, s.r.o.

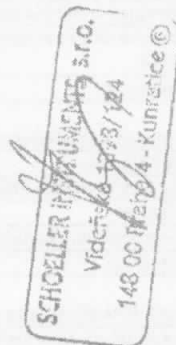
Videňská 1393/124

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Příloha č. 1 - Technické podmínky pro část 1 - konfigurace 3		
Typové označení přístroje		
1 ks chlazený inkubátor IL-11 s příslušenstvím (4 ks police EDA8219) a 1 ks inkubátor IB-25G s příslušenstvím (4 ks police EDA8137)		
Základní požadavky zadavatele		
Zadavatel požaduje dodávku inkubátorů		
Požadované technické a funkční vlastnosti (nabídka uchazečů musí splňovat všechny níže uvedené parametry)	Požadovaná hodnota	Nabídka uchazeče (Pokud je zadavatelem u daného parametru požadovanou hodnotu, je na uchazeč povinen uvést, v opačném případě bude zadavatel vycházet z jím minimální stanovené hodnoty - viz, sloupec "žadovaná hodnota")
počet kusů	2	ANO 2 ks
inkubátor o vnitřním objemu	min. 120 litrů	ANO model IL-11 má 150 litrů a model IB-25G má 151 litrů
teplotní rozsah	1 ks chlazeného inkubátoru s možností inkubace při teplotě od 5 °C, 1 ks s možností inkubace až +70°C	ANO chlazený model IL-11 možnost inkubace při teplotě od 0°C a model IB-25G s možností inkubace až do 70°C
cirkulace	přírodní, případně nucená s možností regulace výkonu ventilátoru snížením výkonu alespoň o 50%	ANO u modelu IL-11 nucená cirkulace s možností regulace výkonu ventilátoru a u modelu IB-25G přirozená cirkulace
přesnost nastavení v krocích po	0,1°C	ANO
display	digitální	ANO
police	min. 6 ks	ANO každého modelu v ceně 2 ks a další jako příslušenství
plně vnější dveře, prosklené vnitřní dveře	ano	ANO
možnost připojení el. přístroje (třepáčky) v inkubátoru	ano	ANO
Kolísání nastavené teploty	max. +/-0,2°C	ANO

Prodávající (uchazeč) prohlašuje, že dodávka bude vyhovovat všem výše uvedeným požadavkům Kupujícího (zadavatele). Pokud by se v průběhu přípravy a realizace dodávky ukázalo, že ke splnění požadavků Kupujícího dle této přílohy je nezbytné dodání dalších zařízení, součástí či příslušenství nebo provedení dalších služeb či prací, zavazuje se Prodávající dodat tato zařízení a provést tyto práce či služby jako součást plnění dodávky dle smlouvy bez zvýšení Kupní ceny (zmiňované dodávky, práce či služby nebudou mít charakter vícedodávek či víceprací).

Ing. Pavel Břicháček, jednatel



Panasonic

CO₂ incubators

Optimising cell culture productivity

MCO-170AIC



Optimum cell growth

Panasonic MCO-170AIC CO₂ incubators offer outstanding quality in performance for successful cell growth.

Discovery powered by
precision



Optimising cell culture productivity

We understand that creating successful cell cultures requires a CO₂ incubator that offers the highest levels of precision, security and ease of use.

Our latest MCO-170AIC CO₂ incubators with Panasonic's innovative technologies offer outstanding quality in performance, maximise cell culture productivity and provide optimum results and reproducibility.

Providing a precisely controlled environment for sensitive cell cultures

Delivering long-term performance, optimal cell viability and successful experiments, each Panasonic incubator provides precise control of CO₂ concentration and temperature, while remaining easy to operate and maintain. The MCO-170AIC CO₂ incubators support a reliable, stable cell culture environment across all shelf positions, meaning each and every cell is safely maintained under ideal conditions.

DHA Direct heat and air jacket system

- Provides high precision temperature control for advanced uniformity and rapid recovery after door opening.

NEW Improved insulation performance and lower running costs

- Delivers improved culture conditions and a reduction in electricity costs.¹

PID Control of CO₂ and temperature

- Precise control guarantees exceptional performance and optimum results.

Dual IR CO₂ sensor

- Minimises the effect of temperature and humidity changes during and after door openings for outstanding CO₂ control and fast recovery.



¹ Compared to previous Panasonic 170 litre CO₂ incubators measured under equivalent operating conditions. (AT 20°C-23°C)

² Compared to previous Panasonic 170 litre CO₂ incubators.

Optimum protection for your cell cultures

We know how valuable your cultures can be.

Our advanced contamination control systems are designed to prevent the loss of your irreplaceable cell cultures with continuous background contamination control, all supported by a new security system.

InCu saFe® copper-enriched stainless steel interior

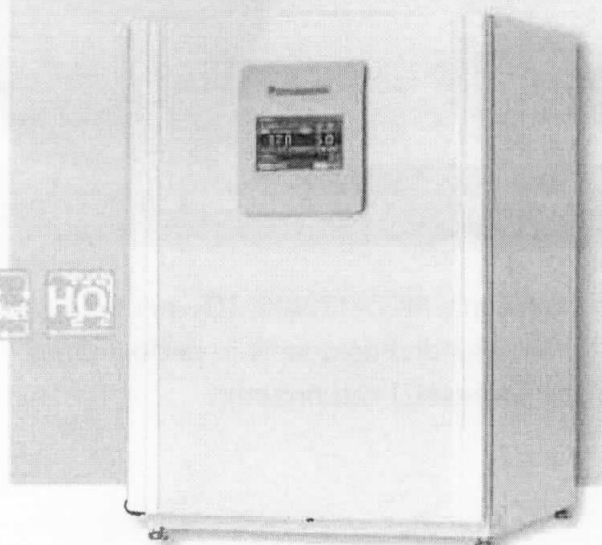
- Protects cell cultures by eliminating surface contamination sources and mitigating the effect of airborne contaminants.

Optional Safe Cell UV® with NEW increased UV lamp life

- Sterilises airborne and water pan contamination with 2.5 times longer lamp life.²

NEW Optional electric door lock

- Provide enhanced security for your cultures and their conditions with an optional automatic electric door lock with password.



Increasing work efficiency

We have designed our incubators with ease of use and efficiency in mind. By delivering a user friendly cell culture incubator with rapid systems and processes, Panasonic can help make your work as simple as possible.

NEW More space for more cultures

- In a laboratory environment it is important to make the most of all the space available. With new integrated shelf supports, the Panasonic MCCO-170AIC CO₂ incubators provide space for up to 25% more culture vessels³.

NEW Integrated shelf supports

- Save valuable time and reduce the risk of contamination with an easy to clean incubator interior featuring fully rounded corners and integrated shelf supports.

Rapid sterilisation cycle

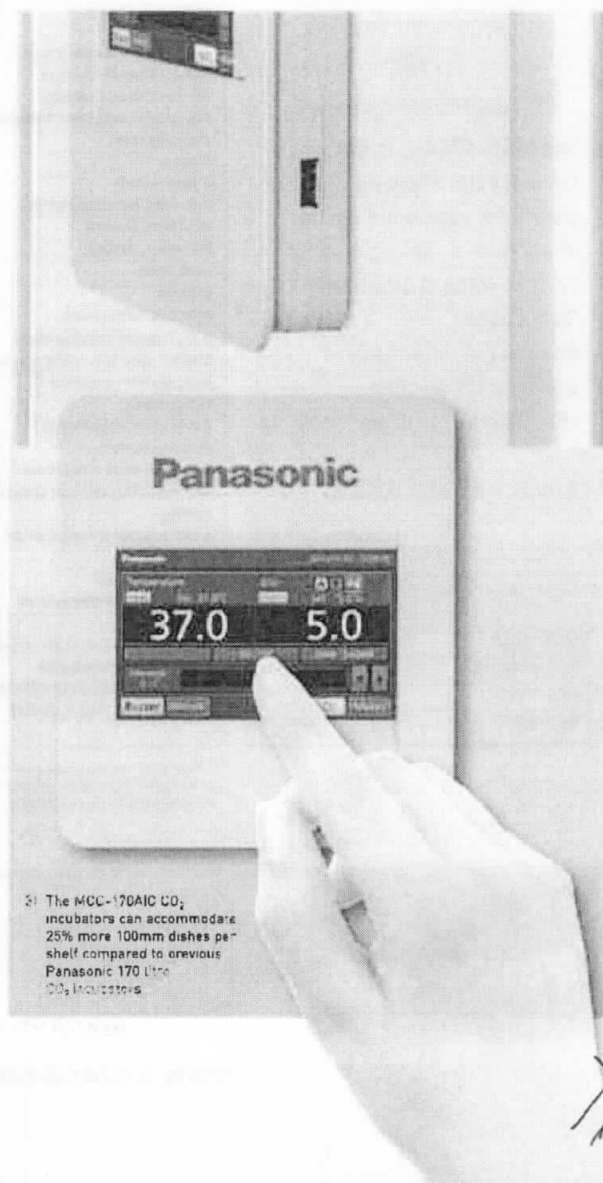
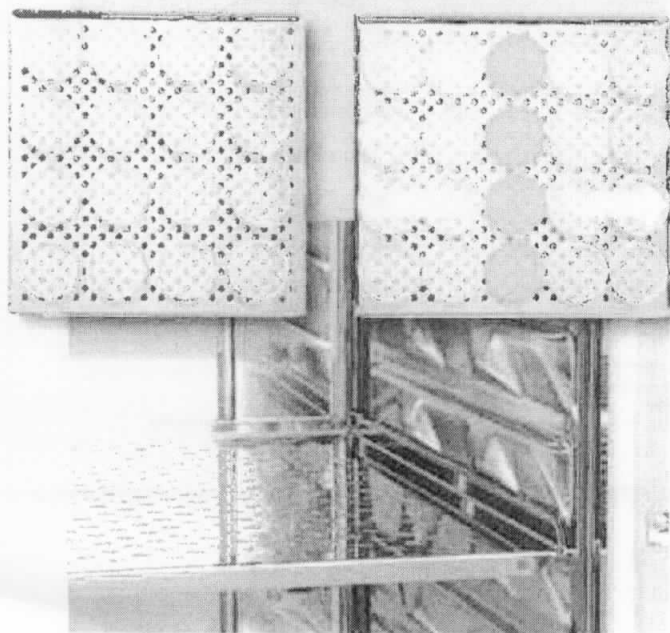
- Panasonic's H₂O₂ vapour sterilisation cycle reduces downtime to less than 3 hours for complete, validatable decontamination for increased productivity.

NEW Full colour LCD touch screen

- The user friendly full colour LCD touch screen provides clear information of incubator status with easy access to controller functions for fast, convenient set-up.

NEW USB port

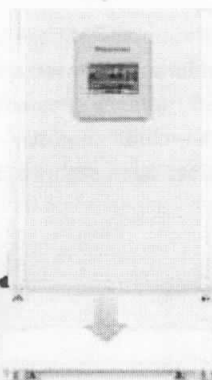
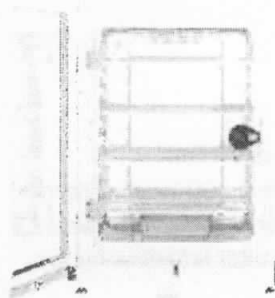
- Optimise cell culture protocols and adhere to standard operating procedures by conveniently transferring data to a USB memory stick and on to a PC. Logged parameters include chamber temperature, CO₂ level, door open status and alarms.



³ The MCCO-170AIC CO₂ incubators can accommodate 25% more 100mm dishes per shelf compared to previous Panasonic 170 litre CO₂ incubators.

XP

Specifications and options

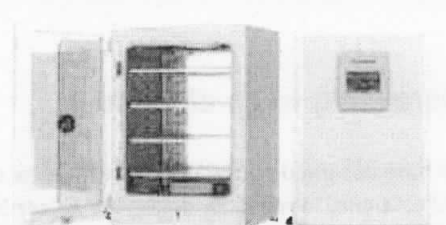


- The MCO-170AIC is designed for stacking, allowing one unit to be positioned on top of another, doubling interior volume without additional floor space.
- An optional roller base is available for stacked installations for easier mobility.

See table below for details.

Double stacking table

Spacer for double-stacking		Upper unit
		MCO-170AIC
Lower unit	MCO-170AIC	MCO-170PS-PW
	MCO-19AIC(M)	MCO-170SB-PW
	MCO-18AC	
	MCO-20AIC	MCO-170SB-PW

MCO-170AIC CO ₂ incubators				
Characteristics				
PUF = Rigid polyurethane foamed insulation V = Visual alarm B = Buzzer alarm R = Remote alarm				
MODEL		MCO-170AIC-PE (standard)	MCO-170AICUV-PE (standard + UV)	MCO-170AICUVH-PE (standard + UV + H ₂ O)
Dimensions				
External dimensions (W x D x H)	mm	620 x 710 x 900		
Internal dimensions (W x D x H)	mm	490 x 523 x 665		
Volume	litres	165		
Shelves	qty	4		
Net weight (approx)	kg	80		
Technical Data				
Power supply	V	230		
Frequency	Hz	50		
Noise level ¹⁾	dB	29		
Insulation material		PUF		
Performance				
Temperature sensor		Thermistor		
CO ₂ sensor		Dual IR		
Temperature control range	°C	+5 above ambient to 50°C (in a 5°C to 35°C ambient)		
Temperature fluctuation	°C	±0.1		
Temperature uniformity	°C	±0.25 ²⁾		
CO ₂ control range and fluctuation	%	0 - 20, ±0.15 ²⁾		
Humidity level	%RH	95, ±5		
Alarms				
Power failure		R		
Out of temperature setting		V-B-R		
High temperature		V-B-R		
Out of CO ₂ setting		V-B-R		
Door open		V-B		
Options				
Safe Cell UV* system		MCO-170UVS-PE	standard	standard
H ₂ O ₂ Decontamination board		MCO-170HB-PE	MCO-170HB-PE	standard
Electric door lock with password		MCO-170EL-PW	MCO-170EL-PW	standard
H ₂ O ₂ vapour generator			MCO-HP-PW	
H ₂ O ₂ reagent			MCO-H202-PE	
Double stacking bracket *			MCO-170PS-PW	
Stacking plate *			MCO-170SB-PW	
CO ₂ gas pressure regulator			MCO-100L-PW	
Automatic CO ₂ cylinder changeover system			MCO-21GC-PW	
Semi-automatic one point gas calibration kit			MCO-SG-PW	
InCu saFe* shelf			MCO-170ST-PW	
InCu saFe* half tray system			MCO-25ST-PW	
Roller base			MCO-170RB-PW	
Optional communication systems ³⁾				
Ethernet interface (LAN)			MTR-L03-PW	
Digital interface (RS232C/RS485)			MTR-480-PW	
Analogue interface (4-20mA)			MCO-420MA-PW	

* If stacking two incubators, make sure the double-stacking dedicated securing hardware and spacer are used. (see options and double stacking table)

Notes: 1) Nominal value
2) Ambient temp 23°C, setting 37°C, CO₂ 5%, no load
3) MCO-170AIC can only be fitted with one communications interface

Panasonic

for more information.

www.biomedical.panasonic.eu

Appearance & specification are subject to change without notice.

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9.

Panasonic RoHS Compliant Products

Panasonic... the new name for SANYO



Take a leap to
Green Business Innovation

Panasonic RoHS Compliant Products ^{10.}



Panasonic aims to be the No.1 Green Innovation Company in the Electronics Industry in 2018, the 100th anniversary of our founding. We will make the 'environment' central to all of our business activities and take the lead in promoting the 'Green Revolution' which is taking place around the world for the next generation. Specifically, we will work to realize our vision with these two 'innovations.'

Green Life Innovation

We will offer better living which provides people around the world with a sense of security, comfort and joy in a sustainable way.

Green Business Innovation

There is the concept that the ideal goal of a manufacturer is to realize 'Zero cost, Zero time, and Zero inventory.' Zero represents the ideal, and our aim is to get as close to this ideal as we possibly can. We will add 'zero emissions,' in other words, zero emissions of CO₂ and other wastes are to be considered equal in importance to the other 'zeroes.'

We are pleased to announce that all Panasonic Biomedical Products are **100% RoHS compliant**.

On the 1st of July 2006, the RoHS legislation (EU Directive 2002/95/EU) came into effect. RoHS is all about the Restriction of Hazardous Substances and reducing the amount of pollution in the Environment. With this legislation, the EU and many other countries are banning toxic substances in electrical equipment

such as Lead, Cadmium, Mercury, Chromium 6+, PBB and PBDE, which can do serious harm to the environment.

Panasonic welcomes the RoHS legislation without hiding behind the 'Article 8: Medical Products' exemption.

Panasonic

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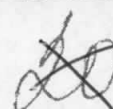
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M.

Incubators

 **Lab
Companion**
Best Products for Reliable Results


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Contents

Incubators

Amb. +3 to 60°C	IB-01E(60L) / IB-11E(150L) / IB-21E(300L)
Amb. +5 to 70°C	IB-05G(80L) / IB-15G(130L) / IB-25G(161L)
Amb. +5 to 70°C	IB-02G-2C(120L) / IB-02G-4C(240L)

Incubators with refrigerator

0 to 60°C	IL-11(150L) / IL-21(240L)
4 to 60°C	IL-11A(162L) / IL-21A(244L)
0 to 60°C	IL-11-2C(150L) / IL-11-4C(300L)

Incubated Shakers

Amb. +5 to 60°C	SI-300(53L) / SI-600(53L)
	SI-971(70L)
Amb. +5 to 80°C	SIF-5000(45L) / SIF-6000(150L)

Incubated Shakers with refrigerator

15 to 60°C	SI-300R(53L) / SI-600R(53L)
4 or Amb. -15 to 60°C	IS-971R(70L) / IS-971RF(70L)
Amb. -20 to 80°C	SIF-5000R(45L) / SIF-6000R(150L)

Personal Incubators

10 to 40°C at Ambient (temp. of 25°C)	ILP-02(14L) / ILP-12(40L)
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Mini Incubator

Amb. +5 to 65°C	IM-10(10L)
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Hybridization Oven

Amb. +5 to 65°C	HO-10(10L)
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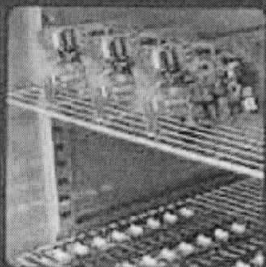
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Technical Benefit

Optimum Control Features

Lab Companion *13*

Precision



Microprocessor PID control
Simple calibration and Auto tuning function

Protection against overheating by
automatic power cutoff from
the heater and controller in sequence

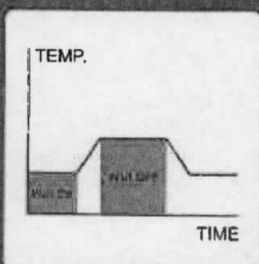
Two separate fuses for
protecting against overcurrent

Open door alert

Safety



Multi Function



Delayed ON/OFF digital timer
from 1 min to 99 hr 59 min

Bright LED display and splash-proof
and easy to clean keypad

Bright Display

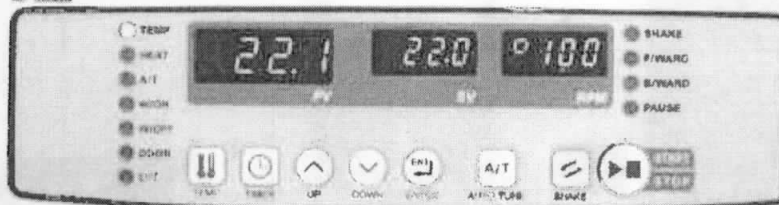


PC Control



RS-232 Communication Interface
(except for IM-10, HO-10, IB-E models)

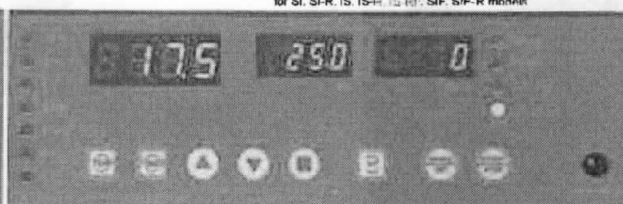
SIF models



for IS-E, IS-B, IS-L, IS-A models

for SI, SI-R, IS, IS-R, IS-RF, SIF, SIF-R models

Digital Display



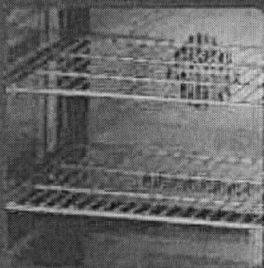
22

Technical Benefit

Constructional Features

Lab Companion 14.

Stainless steel Chamber



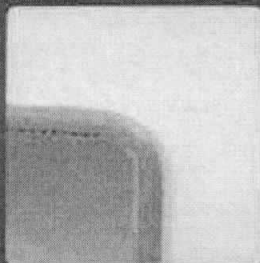
Grade 304 stainless steel chamber interior and dirt-repellent external surface with power coating

Adjustable and electropolished efficient airflow and easy cleaning (except for SI, IS, HO models)

Wire shelves



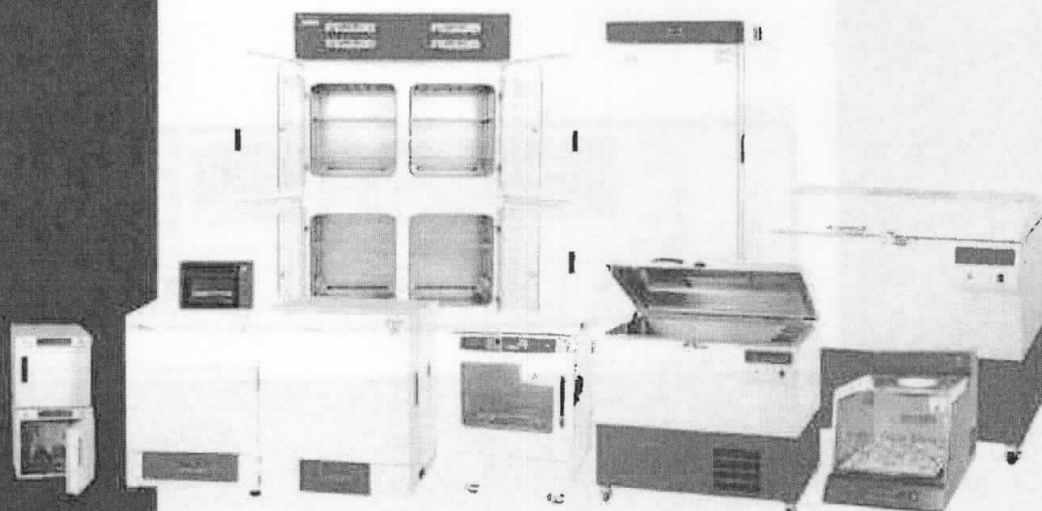
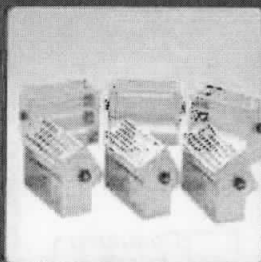
Airtight Door Gasket



Air-tight door gasket minimizing heat loss

Wide selection of accessories can be equipped with each models

Various accessories



~~23~~

Incubators

IB-01E/11E/21E (Amb. +3 to 60°C)



Affordable yet exceptionally reliable incubators featuring film type heaters



Model	IB-01E	IB-11E	IB-21E
Chamber Volume (L / cu ft)	65 / 2.3	150 / 5.3	205 / 7.2
Temperature Range (°C / °F)	Amb. +3 to 60 / Amb. +5.4 to 140		
Fluctuation ¹ at 37°C (±°C / °F)	0.2 / 0.36	0.3 / 0.54	0.1 / 0.18
Variation ¹ at 37°C (±°C / °F)	0.6 / 1.08	0.8 / 1.44	1.1 / 1.98
Interior (mm / inch)	423x355x445 / 16.7x14x17.5	500x515x585 / 19.7x20.3x23	623x515x630 / 24.5x20.3x24.8
Exterior (mm / inch)	533x475x725 / 21x18.7x28.5	595x630x865 / 23.5x24.8x34	740x630x910 / 29.1x24.8x35.8
Net Weight (Kg / lbs)	33 / 72.8	47 / 103.6	57 / 125.7
Electrical Requirements (230V, 50 / 60Hz)	1.1A	2.2A	2.4A
Cat. No.	AAH26015K	AAH26025K	AAH26035K
Electrical Requirements (120V, 50 / 60Hz)	2.1A	4.2A	4.6A
Cat. No.	AAH26016U	AAH26026U	AAH26036U

1) Technical data according to DIN 12880



Microprocessor PID control

Simple calibration and auto-tuning function

Delayed ON/OFF digital timer from 1 min – 99 hr 59 min

Intuitive control panel with bright LED display and touch-sensitive keypad

High temperature limit setting and open door alert

Convenient presetting function for 3 most commonly used temperature settings

Vibration-free design ideal for yeast cultivation

Compact and lightweight design with completely sealed gasket

Stackable up to 2 units using the optional stacking kit

Convenient sample monitoring without affecting chamber temperature via the inner tempered-glass door

Detachable shelves and round-cornered chamber interior allowing easy cleaning

Two wire shelves are provided as standard accessories

Accessories

For detailed information of accessories, please refer to the page 14-17.

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Incubators

IB-05G/15G/25G (Amb. +5 to 70°C)

Lab Companion 16.

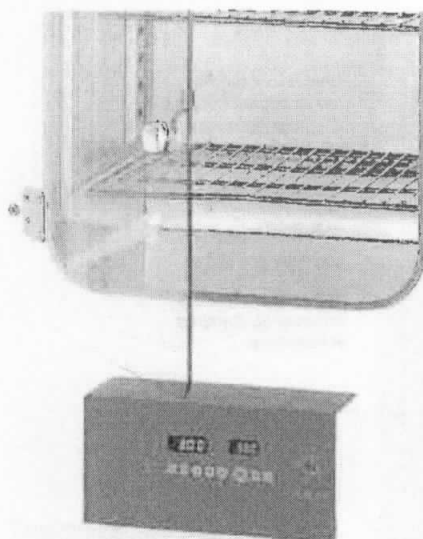
Air-jacketed natural convection

Minimal sample contamination
caused by external air intrusion



Model	IB-05G	IB-15G	IB-25G
Chamber Volume (L / cu ft)	60 / 2.1	102 / 3.6	151 / 5.3
Range (°C / °F)		Amb. +5 to 70 / Amb. +9 to 158	
Temperature			
Fluctuation ¹⁾ at 37°C (±°C / °F)	0.1 / 0.18	0.1 / 0.18	0.2 / 0.36
Variation ¹⁾ at 37°C (±°C / °F)	0.6 / 1.08	0.2 / 0.36	0.6 / 1.08
Interior (mm / inch)	400x360x420 / 15.7x14.2x16.5	480x410x520 / 18.9x16.1x20.5	610x460x540 / 24x18x21.3
Dimension (WxDxH)	595x555x745 / 23x22x29	675x605x855 / 27x24x34	805x655x885 / 32x26x35
Net Weight (kg / lbs)	45 / 99	55 / 121	62 / 136
Electrical Requirements (230V, 50 / 60Hz)	1.3A	2.2A	3.1A
Cat. No.	AAH21162K	AAH21172K	AAH21182K
Electrical Requirements (120V, 50 / 60Hz)	2.8A	4.6A	6.4A
Cat. No.	AAH21166U	AAH21176U	AAH21186U

¹⁾ Technical data according to DIN 12880.



Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min. to 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

Convenient presetting function
for 3 most commonly used
temperature settings

RS-232 interface

Fully insulated dual-wall door
with magnetic rubber gasket

Vibration-free design ideal
for yeast cultivation

Compact and lightweight
design with completely
sealed gasket

Stackable up to 2 units using
the optional stacking kit

Convenient sample monitoring
without affecting chamber
temperature via the inner
tempered-glass door

Detachable shelves and
round-cornered chamber
interior allowing easy cleaning

Durable incoloy heating
element with radiator fan
for efficient heat dissipation

Built-in cable port to use
other instruments inside the
chamber

Two wire shelves are
provided as standard
accessories

Accessories

For detailed information of accessories, please refer to the page 20-23.

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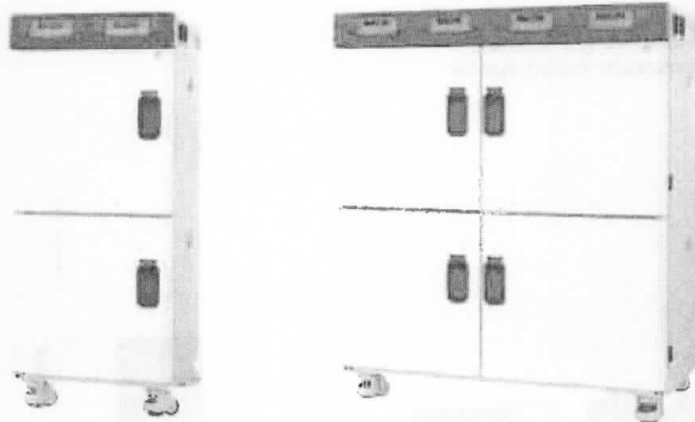
Incubators

IB-02G-2C, IB-02G-4C (Amb. +5 to 70°C)



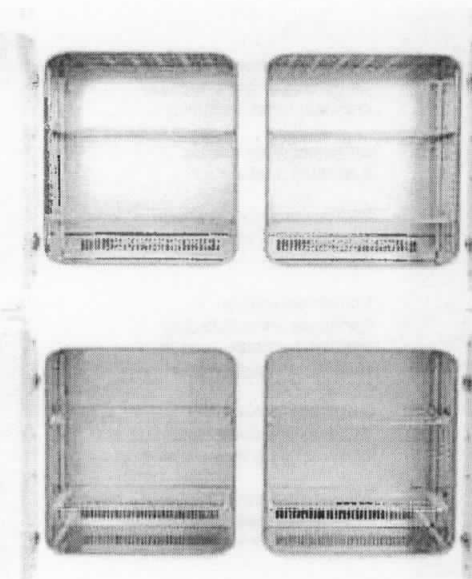
Incubators (2 & 4-chambers)

Featuring two or four 60L forced convection incubators in a single unit, this incubator is designed to offer an ideal solution for laboratories with limited space



Model	IB-02G-2C	IB-02G-4C
Chamber Volume (L / cu ft)	60 / 2.1 x 2 Chambers	60 / 2.1 x 4 Chambers
Temperature Range (°C / °F)	Amb. +5 to 70 / Amb. +9 to 158	
Fluctuation ¹⁾ at 37°C (°C / °F)	0.2 / 0.36	
Variation ¹⁾ at 37°C (°C / °F)	0.5 / 0.9	
Interior (mm / inch)	400x360x420 / 15.7x14.2x16.5	400x360x420 / 15.7x14.2x16.5
Dimension (WxDxH)	x 2 Chambers	x 4 Chambers
Exterior (mm / inch)	570x640x1340 / 22.4x25.2x52.8	1170x640x1340 / 46.1x25.2x52.8
Net Weight (kg / lbs)	110 / 242.5	170 / 374.8
Electrical Requirements (230V, 50 / 60Hz)	4.1A	4.1A x 2EA
Cat. No.	AAH2A115K	AAH2A015K
Electrical Requirements (120V, 50 / 60Hz)	7.5A	7.5A x 2EA
Cat. No.	AAH2A116U	AAH2A016U

1) Technical data according to DIN 12880



Forced air convection

Microprocessor PID control

Simple calibration and auto-tuning function

Delayed ON/OFF digital timer from 1 min - 99 hr 59 min

Intuitive control panel with bright LED display and touch-sensitive keypad

High temperature limit setting and open door alert

Convenient pre-setting function for 3 most commonly used temperature settings

Two or four independently controlled 60L incubators merged into a single unit for space saving

Rounded inner chamber corners for easy cleaning and optimal airflow

Corrosion-resistant incoloy sheath heating element and stainless steel interior

Built-in cable port to use other instruments inside the chamber

Built-in casters for easy transport

Wire shelves are provided as standard accessories (two per a chamber)

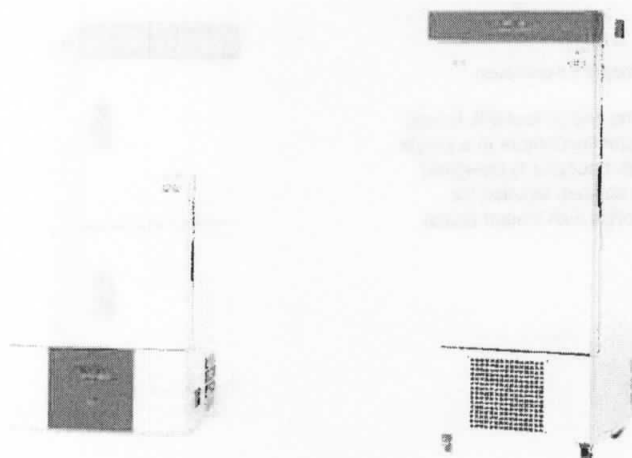
Accessories

For detailed information of accessories, please refer to the page 20-23.

Incubators with refrigerator

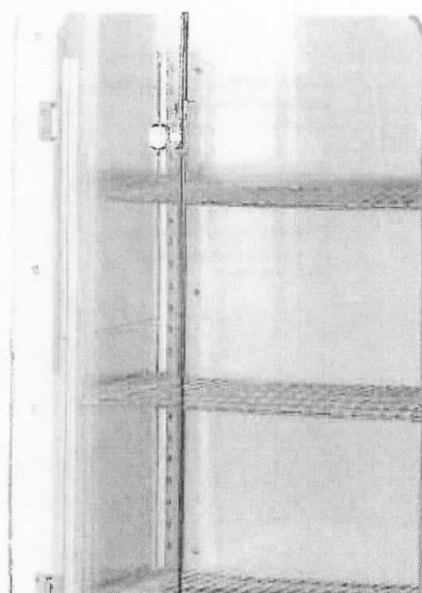
IL-11/21 (0 to 60°C)

Low temperature incubation
performance using a noiseless
HBP compressor cooling system



Model	IL-11	IL-21
Chamber Volume (L / cu ft)	150 / 5.32	244 / 8.6
Refrigerator (HBP)	1 / 8 HBP	1 / 6 HBP
Temperature	0 to 60 / 32 to 140 0.1 / 0.18	
Range (°C / °F)		
Fluctuation ° at 25 °C (°C / °F)	0.5 / 0.9	
Variation ° at 25 °C (°C / °F)	0.4 / 0.72	
Interior (mm / inch)	600x500x500 / 24x20x20	
Dimension (WxDxH)	735x742x1010 / 28.9x29x40	
Exterior (mm / inch)	635x740x1630 / 25x29x64	
Net Weight (Kg / lbs)	100 / 220	
Electrical Requirements (230V)	60Hz, 4.5A	60Hz, 6.4A
Cat. No	AAH22041K	AAH22051K
Electrical Requirements (120V)	60Hz, 8.3A	50Hz, 6.4A
Cat. No	AAH22046U	AAH22056U

1) Technical data according to DIN 12880.



Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min - 99 hr 59 min

Intuitive control panel
with bright LED display
and touch sensitive keypad

High temperature limit
setting and open door alert

Convenient presetting function
for 3 most commonly used
temperature settings

Up to 9 temperature steps
and maximum 200 cycles of
ramp/hold programming
for each profile

Adjustable three-step fan
speed with ramping time
and period control

RS-232 interface

Forced air convection using
an optimal cross flow fan for
chamber temp. uniformity

Large chamber volume
maximum 244L (8.6 cu ft)

Built-in electrical outlet with
a safety cover inside
the chamber

Convenient sample
monitoring without affecting
chamber temperature via the
inner tempered-glass door

Detachable shelves and
round-cornered chamber
interior allowing easy cleaning

Wire shelves are provided
as standard accessories
(two for IL-11, three for IL-21)

Accessories

For detailed information of accessories, please refer to the page 20-23.

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Incubators with refrigerator (air-jacketed)

IL-11A/21A (Amb. +4 to 60°C)



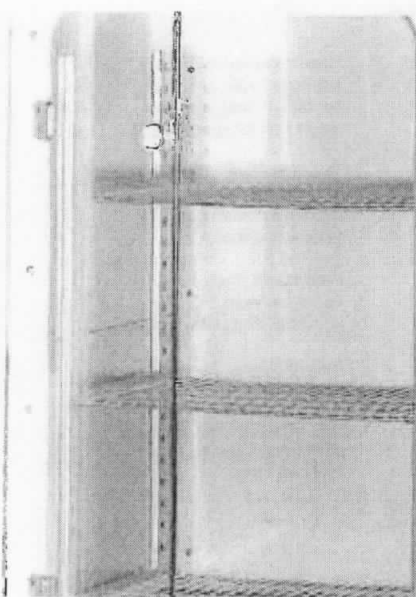
Low temp. incubation performance
using a noiseless HBP
compressor cooling system

Minimal sample contamination
caused by external air intrusion



Model	IL-11A	IL-21A
Chamber Volume (L / cu ft)	162 / 5.7	254 / 9
Refrigerator (Hp)	1 / 6 HBP	1 / 4 HBP
Temperature	4 to 60 / 39.2 to 140	
Range (°C / °F)	0.2 / 0.36	
Fluctuation " at 25°C (±°C / °F)	0.5 / 0.9	
Variation " at 25°C (±°C / °F)		
Dimension	600x540x500	500x540x940
(WxDxH)	/ 24x21.3x20	/ 20x21.3x37
Interior (mm / inch)	770x772x1060	670x760x1680
Exterior (mm / inch)	/ 30x30x42	/ 26x30x66
Net Weight (Kg / lbs)	108 / 238.1	145 / 319.7
Electrical Requirements (230V)	60Hz, 6.9A	60Hz, 8.4A
Cat. No.	AAH22061K	AAH22071K
Electrical Requirements (120V)	60Hz, 10.2A	50Hz, 8.4A
Cat. No.	AAH22063U	AAH22072K
		60Hz, 12.3A
		AAH22073U

1) Technical data according to DIN 12880.



Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed SHUT OFF digital timer
from 1 min - 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

Convenient presetting function
for 3 most commonly used
temperature settings

Up to 8 temperature steps
and maximum 200 cycles of
repetition programmable
for each profile

Adjustable three-speed fan
speed with defrosting time
and period control

RS-232 interface

Natural convection within
the chamber induced by
the heater and the fan
located inside the air jacket

Built-in electrical outlet with
a safety cover inside
the chamber

Convenient sample monitoring
without affecting chamber
temperature via the inner
tempered-glass door

Detachable shelves and
round-cornered chamber
interior allowing easy
cleaning

Wire shelves are provided
as standard accessories
(two for IL-11A, three for IL-21A)

Accessories

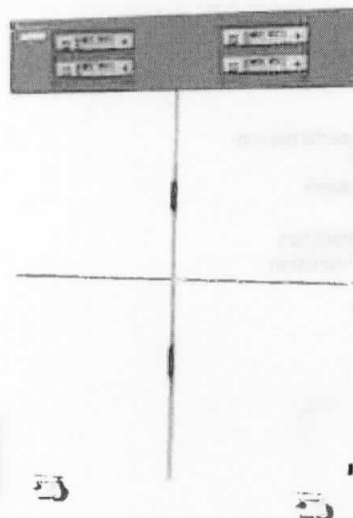
For detailed information of accessories, please refer to the page 20-23.

Incubators with refrigerator

IL-11-2C, IL-11-4C (0 to 60°C)

Incubators with refrigerator
(2 & 4-chambers)

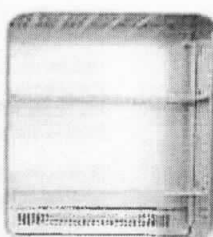
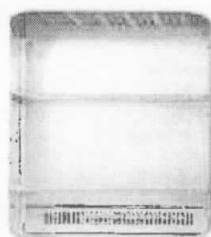
Featuring two or four incubation chambers in a single unit, this incubator is designed to offer an ideal solution for laboratories with limited space



Computer Interface

Model	IL-11-2C	IL-11-4C
Chamber Volume (L/cu.ft)	150 / 5.3 x 2 Chambers	150 / 5.3 x 4 Chambers
Refrigerator (HP)	1/8 HBP x 2EA	1/8 HBP x 4EA
Temperature Range (°C / °F)	0 to 60 / 32 to 140	
Fluctuation ¹⁾ at 25°C (±°C / °F)	0.1 / 0.18	
Variation ¹⁾ at 25°C (±°C / °F)	0.5 / 0.9	
Interior (mm / inch)	600x500x500 / 23.6x19.7x19.7	600x500x500 / 23.6x19.7x19.7
Dimension (WxDxH)	x 2 Chambers 760x760x1690 / 29.9x29.9x66.1	x 4 Chambers 1500x760x1690 / 59.1x29.9x66.1
Net Weight (Kg / lbs)	180 / 397	350 / 772
Electrical Requirements (230V, 60Hz)	9A	9A x 2EA
Cat. No.	AAH28111K	AAH28011K
Electrical Requirements (230V, 50Hz)	9A	9A x 2EA
Cat. No.	AAH28112K	AAH28012K
Electrical Requirements (120V, 60Hz)	16.5A	16.5A x 2EA
Cat. No.	AAH28113U	AAH28013U

1) Technical data according to DIN 12880



Independent temperature and timer control of each chamber using microprocessor PID

Simple calibration and auto-tuning function

Delayed ON/OFF digital timer (from min. 99 to 99 min)

Intuitive control panel with bright LED display and touch-sensitive keypad

Convenient presetting function for 3 most commonly used temperature settings

Up to 9 temperature steps and maximum 200 cycles of repetition programmable for each profile

Adjustable three-step fan speed with defrosting timer and timer control

R.S. 232 interface

Two or four independently controlled 150L chambers (same as IL-11) merged into a single unit for space saving

Convenient sample monitoring without affecting chamber temperature via the inner tempered-glass door

Detachable shelves and round-cornered chamber interior allowing easy cleaning

Built-in casters for easy transport and installation

Wire shelves are provided as standard accessories (two per a chamber)

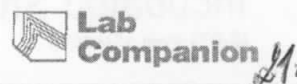
Accessories

For detailed information of accessories, please refer to the page 20-23.

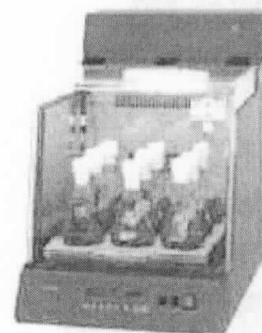
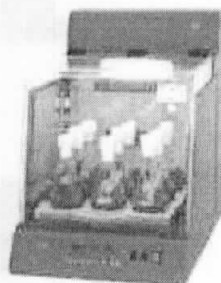
20

Incubated Shakers

SI-300/600 (Amb. +5 to 60°C)

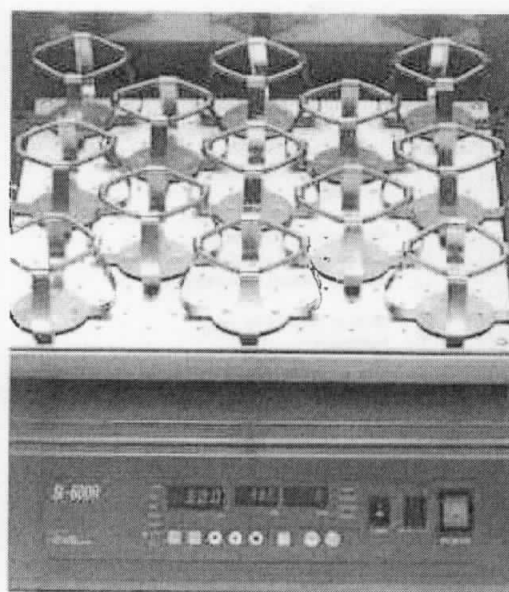


Benchtop incubators
with a dual-action shaker



Model		SI-300	SI-600
Temperature	Range (°C / °F)	Amb. +5 to 60 (Amb. +9 to 140)	
	Fluctuation ¹ at 37°C (±°C / °F)	0.3 / 0.54	0.1 / 0.18
	Variation ¹ at 37°C (±°C / °F)	1.6 / 2.88	0.7 / 1.26
	Motion Type	Orbital or Reciprocating motion selectable	
Shaking System	Speed Range (RPM)	10 to 300	
	Timer	Run time: 10 sec to 999 hr 59 min 59 sec	
	Amplitude Size (mm / inch, dia.)	Forward & Backward, Pause: 10 sec to 59 min 59 sec	
	Recip Stroke Length (mm / inch)	20, 30, 40 / 0.8, 1.2, 1.6 Available - Standard 30 / 1.2	
Dimension	Volume (L / cu ft)	53 / 1.9	83 / 2.9
	Platform (WxD) (mm / inch)	350x350 / 13.8x13.8	450x450 / 17.7x17.7
	Internal (WxDxH) (mm / inch)	410x410x320 / 16.1x16.1x12.6	510x510x320 / 20.1x20.1x12.6
	Overall (WxDxH) (mm / inch)	442x740x622 / 17.4x29.1x24.5	542x850x622 / 21.4x33.5x24.5
	Net Weight (Kg / lbs)	74 / 163	91 / 200
Electrical Requirements (230V)		60Hz, 4A AAH23101K	60Hz, 4A AAH23201K
Cat. No.		AAH23102K	AAH23202K
Electrical Requirements (120V)		50/60Hz, 7.5A AAH23106U	50/60Hz, 7.5A AAH23206U
Cat. No.			

1) Technical data according to DIN 12880.



Dual shaking modes:
orbital or reciprocating motion selectable

Programmable shaking control
(Forward, Backward, Pause)

Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer:
from 1 min. to 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit setting
and open door alert

Convenient pre-setting function
for 3 most commonly used
temperature settings

Up to 9 temperature steps
and maximum 200 cycles
of repetition programmable
for each profile

Adjustable 2-step fan speed
with defrosting time and
period control

RS-232C interface

Maintenance-free and
durable BLDC motor

High-velocity fan ensuring
uniform temperature
distribution and rapid
thermal recovery

Convenient sample monitoring
thanks to the transparent acrylic
lid and the fluorescent lamp

Gas spring lid supports
providing soft closing,
smooth motion, and stopping

Accessories

For detailed information of accessories, please refer to the page 20-23.

Incubated Shakers

IS-971 (Amb. +5 to 60°C)

Lab Companion 22.

Large capacity and heavy workload shaking with rapid heating performance



Model		IS-971
Temperature	Range (°C / °F)	Amb. +5 to 60 / Amb. +9 to 140
	Fluctuation ¹ at 37°C (±°C / °F)	0.2 / 0.36
	Variation ¹ at 37°C (±°C / °F)	0.8 / 1.44
	Motion Type	Orbital or Reciprocating motion selectable
Shaking System	Speed Range (RPM)	10 to 300
	Timer	Run time: 10 sec to 999 hr 59 min 59 sec Forward & Backward, Pause: 10 sec to 59 min 59 sec
	Amplitude Size (mm / inch, dia.)	30, 40, 50, 60, 70 / 1.2, 1.6, 2, 2.4, 2.8 Available - Standard 30 / 1.2
	Recip Stroke Length (mm / inch)	30, 40, 50, 60, 70 / 1.2, 1.6, 2, 2.4, 2.8 Available - Standard 30 / 1.2
Dimension	Volume (L / cu ft)	270 / 9.5
	Platform (WxD) (mm / inch)	755x481 / 29.7x18.9
	Internal (WxDxD) (mm / inch)	894x634x480 / 35.2x25x18.9
	Overall (WxDxD) (mm / inch)	1,132x810x1,045 / 44.6x31.9x41.1
Net Weight (Kg / lbs)		180 / 396.8
Electrical Requirements (230V)		50 / 60Hz, 5.2A
Cat. No.		AAH23306K
Electrical Requirements (120V)		60Hz, 11.2A
Cat. No.		AAH23336U

1) Technical data according to DIN 12880

* Certification only for the IS-971, IS-971R



Dual shaking modes
(orbital or reciprocating motion selectable)

Programmable shaking
motion (Forward/Backward/Pause)

Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min - 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

Convertible preheating
function for 3 timer commonly
used temperature settings

Up to 9 temperature steps
and max. 200 cycles of
repetition programmable for
each profile

Adjustable 3-step fan speed
with, deboosting time and
period control

RS-232 interface

Maintenance-free and
durable BLDC motor

High-velocity fan ensuring
uniform temperature
distribution and rapid thermal
recovery

Gas spring lid supports
providing soft closing,
smooth motion, and stopping

Built-in casters for easy
transport

Lockable lid for added safety

Accessories

For detailed information of accessories, please refer to the page 20-23.

2X

Incubated Shakers

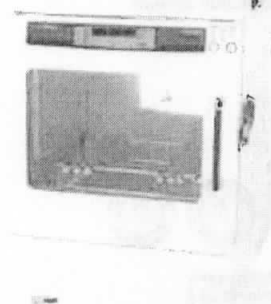
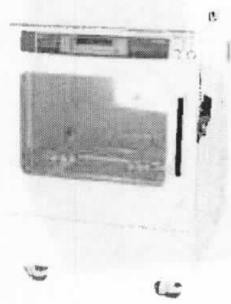
SIF-5000/6000 (Amb. +5 to 80°C)



Lab
Companion

23

Wide range of temperature control
Large chamber volume

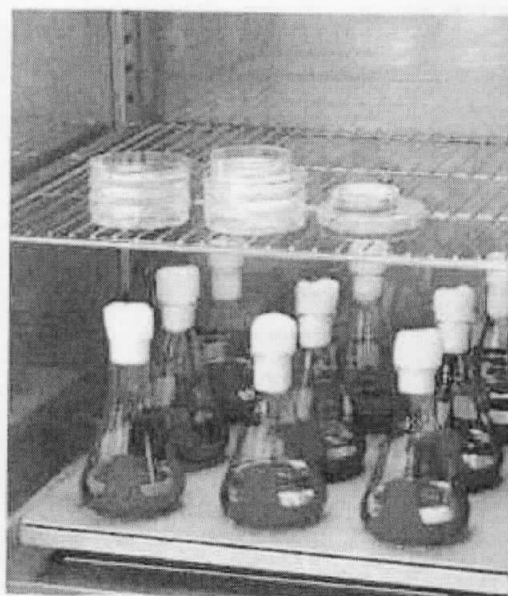


Model		SIF-5000	SIF-6000
Temperature*	Range (°C / °F)	Amb.+5 to 80 / Amb.+9 to 176	
	Fluctuation at 37°C (±°C / °F)	0.1 / 0.18	
	Variation at 37°C (±°C / °F)	1.0 / 1.8	
Shaking System	Motion Type	Orbital or Reciprocating motion (Default: Orbital motion)	
	Speed Range (RPM)	10 to 300 (Stackable Top: 10 to 250)	
	Timer	Run time(10sec ~ 999hr 59min 59sec) Pause, Forward, Backward(10sec ~ 59min 59sec)	
	Amplitude Size (mm / inch, dia.)	19, 25 / 0.75, 1 Available - Standard 19 / 0.75	
	Recip Stroke Length (mm / inch)	25, 38 / 1, 1.5 Available - Standard 25 / 1	
Dimension	Volume (L / cu ft)	80 / 2.8	
	Platform (WxD, mm / inch)	350x350 / 13.8x13.8	
	Interior (WxDxH, mm / inch)	440x440x418 / 17.3x17.3x16.5	
	Exterior (WxDxH, mm / inch)	570x815x900 / 22.4x32.1x35.4	
	Shelves (Standard / Max)	2 / 8	
Electrical Requirements (230V)	Net Weight (kg / lbs)	120 / 264.6	
	Cat. No.	AAH27021K	
	Electrical Requirements (120V)	50/60Hz, 11.1A	
Cat. No.		AAH27026U	
		50Hz, 4A	
		AAH27022K	
Cat. No.		50/60Hz, 11.2A	
		AAH27016U	
		50Hz, 5.4A	
		AAH27011K	
		50Hz, 5.4A	
		AAH27012K	

* Permissible environmental conditions: temperature (5°C to 40°C) and relative humidity (up to 80%).

* All specifications are under ambient temperature 20°C (with refrigerator) / 25°C (without refrigerator), no load.

1) Technical data according to DIN 12880



Dual shaking modes
(orbital or reciprocating) (three sub-modes)

Programmable shaking control
(Forward & Backward Phase)

Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min ~ 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

Convenient presetting function
for 3 most commonly used
temperature settings

Up to 9 temperature steps
and maximum 200 cycles
of motion programmable
for each profile

Adjustable 3-speed fan speed
with defrosting time and
sensor control

RS-232 interface

Maintenance-free and
durable BLDC motor

Stackable up to 2 units

High-velocity fan ensuring
uniform temperature distribution
and rapid thermal recovery

Convenient sample monitoring
thanks to the transparent front
window and the built-in lamp
minimizing the need to open
the door

Built-in casters for easy
transport

Lockable door for added safety

Built-in electrical outlet with
a safety cover inside the
chamber

Accessories

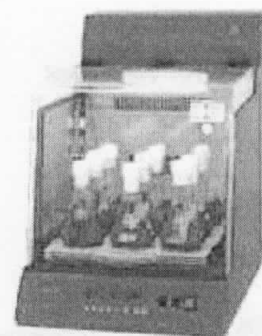
For detailed information of accessories, please refer to the page 20-23.

Incubated Shakers with refrigerator

SI-300R/600R (15 to 60°C)

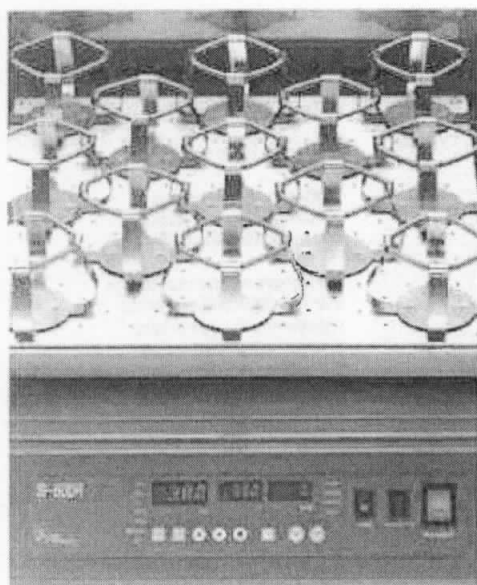
Lab Companion 24.

Benchtop incubator
with a dual-action shaker



	Model	SI-300R	SI-600R
	Range (°C / °F)	15 to 60 / 59 to 140	
Temperature	Fluctuation ° at 37°C (±°C / °F)	0.6 / 1.08	0.2 / 0.36
	Variation ° at 37°C (±°C / °F)	1.5 / 2.7	0.3 / 0.54
	Refrigerator (Hp)	1 / 8 HBP (220V, 230V) 1 / 6 HBP (100V, 120V)	1 / 8 HBP (220V, 230V) 1 / 6 HBP (100V, 120V)
Shaking System	Motion Type	Orbital or Reciprocating motion selectable	
	Speed Range (RPM)	10 to 300	
	Timer	Run time 10 sec to 999 hr 59 min 59 sec Forward & Backward, Pause: 10 sec to 59 min 59 sec	
	Amplitude Size (mm / inch, dia.)	20, 30, 40 / 0.8, 1.2, 1.6 Available - Standard 30 / 1.2	
	Recip Stroke Length (mm / inch)	20, 30, 40 / 0.8, 1.2, 1.6 Available - Standard 30 / 1.2	
Dimension	Volume (L / cu ft)	53 / 1.9	83 / 2.9
	Platform (WxD) (mm / inch)	350x350 / 13.8x13.8	450x450 / 17.7x17.7
	Internal (WxDxH) (mm / inch)	410x410x320 / 16.1x16.1x12.6	510x510x320 / 20.1x20.1x12.6
	Overall (WxDxH) (mm / inch)	442x740x622 / 17.4x29.1x24.5	542x850x622 / 21.4x33.5x24.5
	Net Weight (Kg / lbs)	85 / 187	102 / 225
Electrical Requirements (230V)	50Hz, 5.5A	60Hz, 5.5A	50Hz, 5.5A
Cat. No	AAH23112K	AAH23211K	AAH23212K
Electrical Requirements (120V)	60Hz, 10.1A		60Hz, 10.1A
Cat. No	AAH23113U		AAH23213U

1) Technical data according to DIN 12880



Dual shaking modes
orbital or reciprocating motion selectable

Programmable shaking
motion (forward, backward, pause)

Microprocessor PID control

Simple calibration and
auto-tuning function

Display ON/OFF digital timer
from 1 min - 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit setting
and open door alert

Convenient presetting
function for 3 most commonly
used temperature settings

Up to 9 temperature slots
and maximum 200 cycles
of repetition programmable
for each profile

Adjustable 3-step fan speed
with defrosting time and
period control

RS-232 interface

Maintenance-free and
durable BLDC motor

High-velocity fan ensuring
uniform temperature
distribution and rapid
thermal recovery

Convenient sample
monitoring thanks to the
transparent acryl lid and the
fluorescent lamp

Gas spring lid supports
providing soft closing,
smooth motion, and stopping

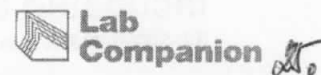
Environment-friendly
CFC-free refrigerant

Accessories

For detailed information of accessories, please refer to the page 20-23.

Incubated Shakers with refrigerator

IS-971R/971RF (4 to 60°C / Amb. -15 to 60°C)



Large capacity and heavy workload shaking with rapid heating and cooling performance



Model		IS-971R	IS-971RF
Temperature	Range (°C / °F)	4 to 60 / 40 to 140	Amb. -15 to 60 / Amb. -27 to 140
	Fluctuation ¹ at 37°C (±°C / °F)		0.2 / 0.36
	Variation ¹ at 37°C (±°C / °F)		0.8 / 1.44
	Refrigerator	1 / 3 LBP (AC 120V) 1 / 6 HBP (AC 230V)	1 / 3 LBP (AC 120V) 1 / 4 HBP (AC 230V)
Shaking System	Motion Type	Orbital or Reciprocating motion selectable	
	Speed Range (RPM)	10 to 300	
	Timer	Run time: 10 sec to 999 hr 59 min 59 sec Forward & Backward, Pause: 10 sec to 59 min 59 sec	
	Amplitude Size (mm / inch, dia.)	30, 40, 50, 60, 70 / 1.2, 1.6, 2, 2.4, 2.8 Available - Standard 30 / 1.2	
Dimension	Recip Stroke Length (mm / inch)	30, 40, 50, 60, 70 / 1.2, 1.6, 2, 2.4, 2.8 Available - Standard 30 / 1.2	
	Volume (L / cu ft)	270 / 9.5	
	Platform (WxD) (mm / inch)	755x481 / 29.7x18.9	
	Internal (WxDxH) (mm / inch)	894x634x480 / 35.2x25x18.9	
Electrical Requirements (230V)	Overall (WxDxH) (mm / inch)	1,132x810x1,045 / 44.6x31.9x41.1	1,132x810x1,075 / 44.6x31.9x42.3
	Net Weight (kg / lbs)	195 / 429.9	210 / 462.9
Electrical Requirements (120V)	60Hz, 7.3A	50Hz, 7.3A	60Hz, 9.3A
	AAH23321K	AAH23322K	AAH23351K
Cat. No.	60Hz, 13.8A		60Hz, 17A
	AAH23346U		AAH23356U

1) Technical data according to DIN 12880

* Certification only for the IS-971, IS-971R



Dual shaking modes
Orbital & Reciprocating motion

Programmable shaking control
Forward & Backward, Pause

Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min - 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

RS-232 interface

Convenient preheating
function for 3 most commonly
used temperature settings

Up to 8 temperature zones
and max. 200 cycles of
repetition programming for
each profile

Adjustable 5-step fan speed
with decreasing time and
period control

Maintenance-free and
durable BLDC motor

High-velocity fan ensuring
uniform temperature
distribution and rapid thermal
recovery

Convenient sample
monitoring thanks to the
transparent top viewing
window minimizing the need
to open the lid (IS - 971R only)

Gas spring lid supports
providing soft closing,
smooth motion, and stopping

Environment-friendly
CFC-free refrigerator

Built-in casters for easy
transport

Lockable lid for added safety

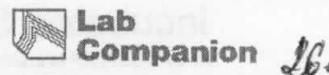
Adjustable 5-brightness
(maximum 12,000 lux) illumination
lamp (optional for IS-971RF model only)

Accessories

For detailed information of accessories, please refer to the page 20-23.

Incubated Shakers with refrigerator

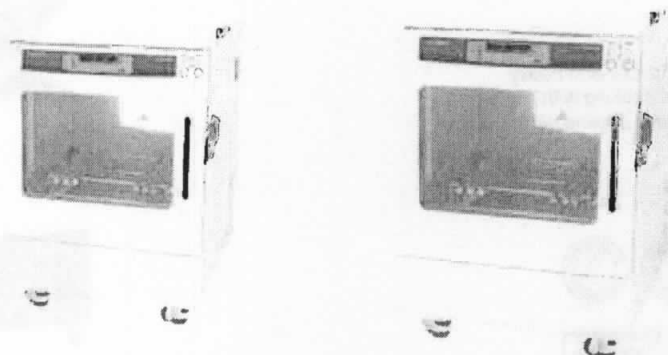
SIF-5000R/6000R (Amb. -20 to 80°C)



Wide range of temperature control
Large chamber volume



Computer Interface

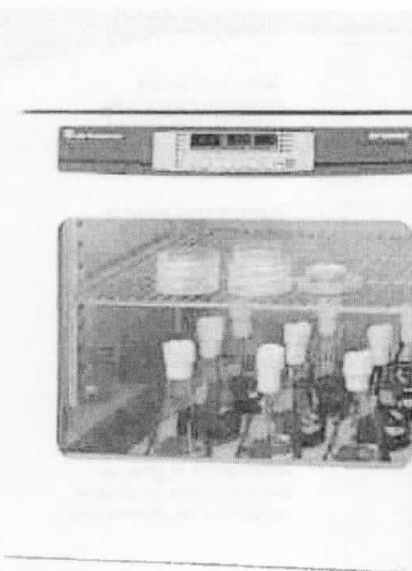


Model		SIF-5000R	SIF-6000R
Temperature	Range (°C / °F)	Amb.-20 to 80 / Amb.-36 to 176	
	Fluctuation at 37°C (±°C / °F)	0.1 / 0.18	
	Variation at 37°C (±°C / °F)	1.0 / 1.8	
Shaking System	Refrigerator (Hp)	1/8Hp, HBP	1/6Hp, HBP
	Motion Type	Orbital or Reciprocating motion (Default: Orbital motion)	
	Speed Range (RPM)	10 to 300 (Stackable Top: 10 to 250)	
	Timer	Run time(10sec ~ 999hr 59min 59sec) Pause, Forward, Backward(10sec ~ 59min 59sec)	
Dimension	Amplitude Size (mm / inch, dia.)	19, 25 / 0.75, 1 Available - Standard 19 / 0.75	
	Recip Stroke Length (mm / inch)	80 / 2.8	
	Volume (L / cu ft)	150 / 5.3	
	Platform (WxD, mm / inch)	350x350 / 13.8x13.8	
	Interior (WxDxH, mm / inch)	440x440x418 / 17.3x17.3x16.5	
	Exterior (WxDxH, mm / inch)	570x815x900 / 22.4x32.1x35.4	
Electrical Requirements (230V)	Shelves (Standard / Max)	2 / 8	
	Net Weight (kg / lbs)	130 / 286.6	
Cat No.	Electrical Requirements (120V)	60Hz, 7.2A AAH27121K	
	Cat No.	60Hz, 7.3A AAH27111K	50Hz, 7.3A AAH27112K
Cat No.	Electrical Requirements (120V)	60Hz, 12.9A AAH27123U	
	Cat No.	60Hz, 13.1A AAH27113U	50Hz, 7.3A AAH27112K

※ Permissible environmental conditions: temperature (5°C to 40°C) and relative humidity (up to 80%).

※ All specifications are under ambient temperature 20°C (with refrigerator) / 25°C (without refrigerator), no load.

1) Technical data according to DIN 12880



Dual shaking modes
Orbital or Reciprocating motion selectable

Programmable shaking
motion (Forward & Backward / Pause)

Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min ~ 99 hr 59 min

Intuitive control panel
with eight LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

Convenient presetting
function for 3 most commonly
used temperature settings

Up to 9 temperature steps
and maximum 200 cycles
of repetition programmable
for each profile

Adjustable 3-step fan speed
with defrosting time and
beep control

RS-232 interface

Specified up to 2 units

Maintenance free and
quiet BLDC motor

High-velocity fan ensuring
uniform temp. distribution
and rapid thermal recovery

Convenient sample
monitoring thanks to the
transparent front window and
the built-in lamp minimizing
the need to open the door

Environment-friendly
CFC-free refrigerant

Built-in casters for easy
transport

Lockable door for added
safety

Built-in electrical outlet with
a safety cover inside the
chamber

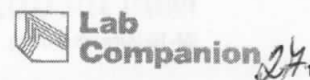
Accessories

For detailed information of accessories, please refer to the page 20-23.

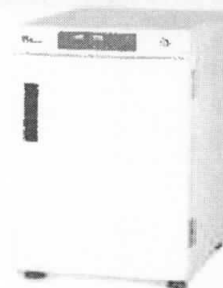
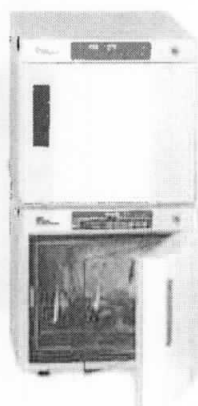
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Personal Incubators

ILP-02/12 (10 to 40°C at ambient temp. of 25°C)



Peltier cooled incubators
generate little vibration,
noise, and heat



Model	ILP-02	ILP-12
Chamber Volume (l / cu ft)	14 / 0.5	48 / 1.7
Temperature Range (°C / °F)	10 to 40 / 50~104 at ambient temperature of 25°C	
Fluctuation ¹⁾ at 25°C (±°C / °F)	0.1 / 0.18	
Variation ¹⁾ at 25°C (±°C / °F)	0.5 / 0.9	
Interior (mm / inch)	315x200x230 / 12.4x7.9x9.1	334x334x430 / 13.1x13.1x17
Dimension (WxDxH)	430x495x400 / 17x19.4x15.7	430x665x620 / 17x26.2x24.4
Net Weight (kg / lbs)	27.5 / 60.6	49 / 108
Electrical Requirements (230V)	60Hz, 1.8A	50Hz, 1.8A
Cat. No.	AAH24031K	AAH24032K
Electrical Requirements (120V)	60Hz, 3.4A	60Hz, 3.5A
Cat. No.	AAH24033U	AAH24041K
		60Hz, 6.7A
		AAH24043U

1) Technical data according to DIN 12880.



Microprocessor PID control

Simple calibration and
auto-tuning function

Delayed ON/OFF digital timer
from 1 min to 99 hr 59 min

Intuitive control panel
with bright LED display
and touch-sensitive keypad

High temperature limit
setting and open door alert

Convenient presetting
function for 3 most commonly
used temperature settings

Up to 6 temperature steps
and max. 999 cycles of
recursion programmable for
each profile

Adjustable 3 step fan speed
with defrosting time and
period control

RS-232 interface

Convenient sample
monitoring without affecting
chamber temperature via the
inner tempered-glass door

Environment-friendly
insulation material (EPDM) used
for safety and convenience
(compliant with ASTM-C534 specification)

Space-saving design
allowing even the smaller^(14L)
unit to hold two 1000mL
Erlenmeyer flasks

Wire shelves are provided
as standard accessories
(one for ILP-02, two for ILP-12)

Accessories

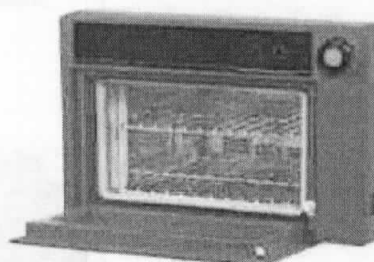
For detailed information of accessories, please refer to the page 20-23.

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Mini Incubator

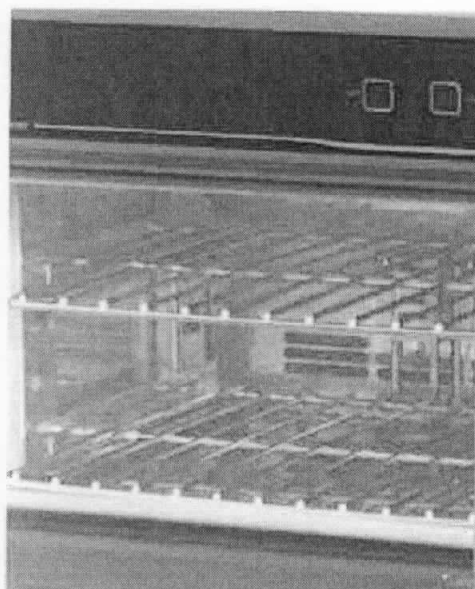
IM-10 (Amb. +5 to 65°C)

Compact design for efficient lab space utilization Maximum 8 microplates can be inserted to inner chamber for ELISA



Model		IM-10
Temperature	Range (°C / °F)	Amb. +5 to 65 / Amb. +9 to 149
	Fluctuation at 37°C (±°C / °F)	0.5 / 0.9
	Variation at 37°C (±°C / °F)	0.5 / 0.9
	Volume (L / cu ft)	10 / 0.4
Dimension	Wire Shelf (WxD) (mm / inch)	247 x 247 / 9.7 x 9.7
	Internal (WxDxH) (mm / inch)	278 x 262 x 160 / 11 x 10.4 x 6.3
	External (WxDxH) (mm / inch)	400 x 410 x 264 / 15.7 x 16.1 x 10.4
	Net Weight (kg / lbs)	12.8 / 28.2
Electrical requirements (230V, 50/60 Hz)		1.0A
Cat. No.		AAH24315K
Electrical requirements (120V, 50 Hz)		1.2A
Cat. No.		AAH24316U

1) Technical data according to DIN 12880



Simple calibration

Alarms are activated for open door, temperature limit alarm

Protection of the main body and the circuit board against overheating

Microprocessor PID control

Ease-of-operation provided by a bright VFD, responsive touch buttons, and a jog dial

Compact design for efficient lab space utilization

Transparent polycarbonate window providing a clear view of the chamber interior

Wire shelves are provided for space saving of inner chamber

Maximum 4 wire shelves supporting 8 microplates is especially suitable for ELISA

Push buttons for easy opening of door

Accessories

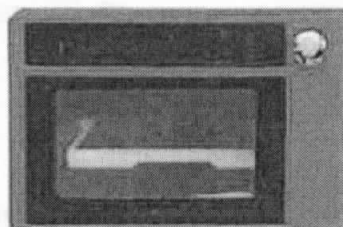
For detailed information of accessories, please refer to the page 20-23.

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Hybridization Oven

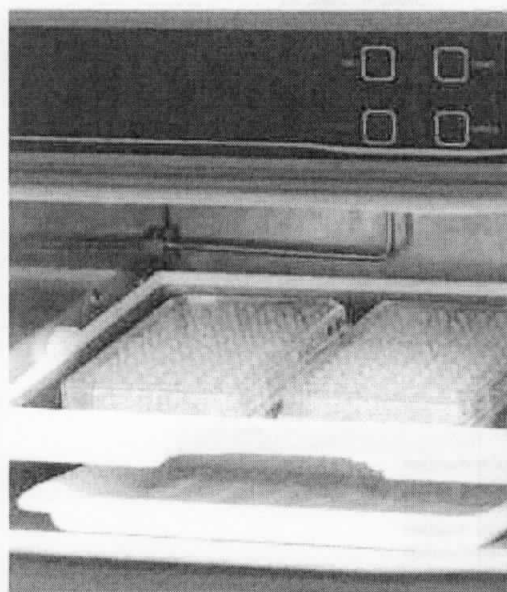
HO-10 (Amb. +5 to 65°C)

Ideal for reproducibility for various molecular biology applications



Model	HO-10
Temperature	Amb. +5 to 65 / Amb. +9 to 149
	0.5 / 0.9
	0.5 / 0.9
Shaking System	Rocking Motion
	5 to 50
	8.5°±1
	1 / 2.2
	10 / 0.4
	256 x 198 / 10.1 x 7.8
Dimension	278 x 262 x 160 / 11 x 10.4 x 6.3
	400 x 410 x 264 / 15.7 x 16.1 x 10.4
	14 / 30.9
	1.2A
Electrical requirements (230V, 60 Hz)	AAH1B011K
Cat. No.	1.2A
Electrical requirements (230V, 50 Hz)	AAH1B012K
Cat. No.	

1) Technical data according to DIN 12880



Rocking motion

Simple calibration

Alarms are activated for low humidity, open door, temperature limit alert

Protection of the main body and the control board against overheating

Microprocessor PID control

Ease of operation provided by a bright VFD, responsive touch buttons and a jog dial

Memory function of programmed protocols allowing relevant parameters of each protocol step to be stored

Real-time protocols should be properly designed and set up as it is not intended for safety purposes

Compact design for efficient lab space utilization

Transparent polycarbonate window providing a clear view of the chamber interior

Built-in sliding shelf for quick and convenient insertion or removal of samples

Sticky pad on sliding shelf for preventing accidental movement or spills of samples during operation

Drying function for the hybridization and washed membranes or strips

Accessories

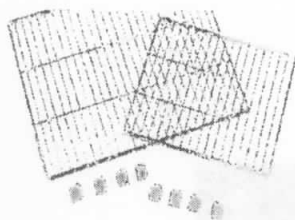
For detailed information of accessories, please refer to the page 20-23.

Accessories

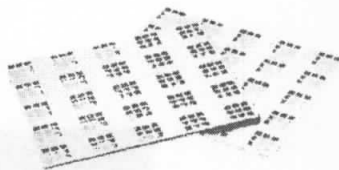
for Incubators



Lab Companion 30.



Wire Shelves



Perforated Shelves



Universal Platforms

Wire Shelves

Stainless steel and electropolished shelves are readily removed without using tools for easy cleaning.

Cat No.	Model	Height	Material	Weight
EDA8136	IB-05G	2	8	366x316 / 14.4x12.4
EDA8135	IB-15G	2	12	446x366 / 17.6x14.4
EDA8137	IB-25G	2	12	576x419 / 22.7x16.5
EDA8136	IB-01E	2	11	366x316 / 14.4x12.4
EDA8220	IB-11E	2	14	466x490 / 17.6x19.3
EDA8219	IB-21E	2	15	566x466 / 22.3x17.6
EDA8136	IB-02G-2C	4	16	366x316 / 14.4x12.4
	IB-02G-4C	8	32	
	IL-11 / 11A	2	12	
EDA8219	IL-11-2C	4	24	566x466 / 22.3x17.6
	IL-11-4C	8	48	
	IL-21 / 21A	3	26	
EDA8220	ILP-02	1	6	466x490 / 17.6x19.3
EDA8223	ILP-12	2	11	195x310 / 7.7x12.2
EDA8221	SIF-5000 / R	2	8	305x299 / 12x11.8
EDA8235	SIF-5000 / R	2	11	416x406 / 16.4x16.0
EDA8233	IM-10	2	5	516x506 / 20.3x19.9
EDA8244		2	5	247x247 / 9.7x9.7

Perforated Shelves

Stainless steel shelves are readily removed without using tools for easy cleaning.

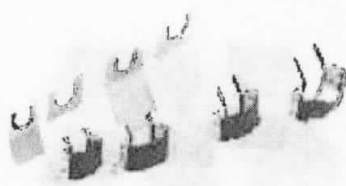
Cat No.	Models	Description	
		Height	Dimensions
AAA12531	IB-05G	8	366x316 / 14.4x12.4
AAA12532	IB-15G	12	446x366 / 17.6x14.4
AAA12535	IB-25G	12	576x419 / 22.7x16.5
AAA12531	IB-01E	11	366x316 / 14.4x12.4
AAA22522	IB-11E	14	466x490 / 17.6x19.3
AAA22521	IB-21E	15	566x466 / 22.3x17.6
AAA12531	IB-02G-2C	16	366x316 / 14.4x12.4
	IB-02G-4C	32	
	IL-11 / 11A	12	
AAA22521	IL-11-2C	24	566x466 / 22.3x17.6
	IL-11-4C	48	
	IL-21 / 21A	26	
AAA24501	ILP-02	6	195x310 / 7.7x12.2
AAA24502	ILP-12	11	305x299 / 12x11.8
AAA24511	IM-10	5	247x247 / 9.7x9.7

Stacking Kits

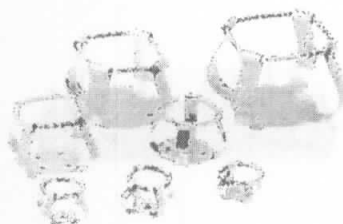
Stackable up to 2 units using exclusive stacking kits for space saving. (for IB-G and IB-E Models only)

Cat No.	Models	Description
AAA21521	IB-05G	Stacking kits for stackable chambers
AAA21522	IB-15G	Stacking kits for stackable chambers
AAA21523	IB-25G	Stacking kits for stackable chambers
AAA26501	IB-01E	Stacking kits for stackable chambers
AAA26502	IB-11E	Stacking kits for stackable chambers
AAA26503	IB-21E	Stacking kits for stackable chambers

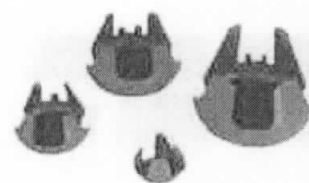
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Funnel Clamps



Flask Clamps



Plastic Clamps

Universal Platforms, Flask Clamps, and Funnel Clamps

Universal platforms provide flexibility for mixing assortments of test tubes and glassware of varying sizes on a single platform. Various clamps for Erlenmeyer flasks and separatory funnels are available.

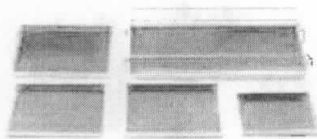
Description			SI-300	SI-600	IS-971	SIF-5000	SIF-6000
Universal Platforms (ea)			AAA23501-V1	AAA23502-V1	AAA23503-V1	AAA31501-V1	AAA31502-V1
Flask Clamps							
Clamp	Flask	Erlenmeyer Volume					
AAA23550	(AAA30570)	for 50mL	28 (22)	45 (30)	99 (65)	36 (28)	55 (39)
AAA23551	(AAA30571)	for 100mL	24 (16)	36 (25)	74 (52)	28 (16)	44 (29)
AAA23552	(AAA30573)	for 250mL	13 (9)	18 (17)	39 (33)	13 (12)	24 (20)
AAA23556	(AAA30574)	for 300mL	13 (9)	18 (17)	39 (33)	13 (12)	24 (16)
AAA23553	(AAA30575)	for 500mL	9 (8)	13 (9)	25 (20)	10 (9)	16 (12)
AAA23554	(AAA30576)	for 1L	4 (4)	7 (8)	14 (12)	5 (5)	8 (9)
AAA23555	(AAA30577)	for 2L	2 (2)	5 (4)	9 (6)	4 (4)	5 (5)
AAA23557	-	for 2.8L	1	2	6	2	4
AAA23558	-	for 4L	-	-	4	-	2
AAA23559	-	for 6L	-	-	4	-	2
Separatory Funnel Clamps							
Clamp	Separatory Funnel	Volume					
AAA23562		for 250mL	4	6	11	4	6
AAA23563		for 500mL	2	3	9	2	3
AAA23564		for 1L	-	2	5	-	2
AAA23565		for 2L	-	-	4	-	-

Dedicated Platforms

When using a single flask size only, the dedicated platforms with pre-installed clamps provide maximum capacity. 250mL and 500mL clamps are standard but other sizes can be available.

Cat. No.	Description
AAA23611	An universal platform for SI-300 Models with 250mL flask clamps 13ea
AAA23612	An universal platform for SI-300 Models with 500mL flask clamps 9ea
AAA23621	An universal platform for SI-600 Models with 250mL flask clamps 18ea
AAA23622	An universal platform for SI-600 Models with 500mL flask clamps 13ea
AAA23631	An universal platform for IS-971 Models with 250mL flask clamps 39ea
AAA23632	An universal platform for IS-971 Models with 500mL flask clamps 25ea
AAA31551	An universal platform for SIF-5000 Models with 250mL flask clamps 13ea
AAA31552	An universal platform for SIF-5000 Models with 500mL flask clamps 10ea
AAA31561	An universal platform for SIF-6000 Models with 250mL flask clamps 24ea
AAA31562	An universal platform for SIF-6000 Models with 500mL flask clamps 16ea

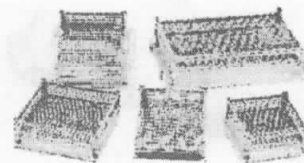
* A dedicated platform is sold with setting each max. mountable amount of flask clamps on.



Rubber Mats



Universal Attachments



Spring Wire Racks

Spring Wire Racks

Ideal for holding a wide variety of tubes, flasks, and other glassware. All components are made of stainless steel.

Description	SI-3000	SI-6000	SI-971	SI-15000	SI-20000
Model	AAA23521-VI	AAA23522-VI	AAA23523-VI	AAA31521-VI	AAA31522-VI
for 50mL	16	25	40	16	25
for 100mL	9	16	28	9	16
for 250mL	4	9	15	4	9
for 300mL	4	9	15	4	9
for 500mL	4	5	10	4	5
for 1L	2	4	4	2	4
for 2L	1	2	4	1	2
for 2.8L	1	2	4	1	2

Rubber Mats

Designed for low-speed applications, non-skid rubber mats allow quick addition or removal of flasks, plates or tubes.

Model	SI-3000	SI-6000	SI-971	SI-15000	SI-20000
Part No.	AAA23531	AAA23532	AAA23533	AAA31531	AAA31532

Universal Attachments (Utility Carriers)

Several adjustable clamping bars for quickly securing a variety of glassware or tubes on non-skid rubber mats. Suitable for flat-bottomed flasks of various sizes.

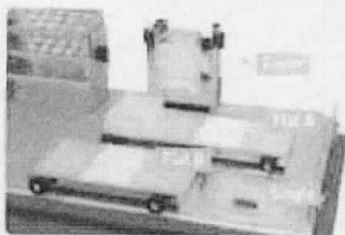
Model	SI-3000	SI-6000	SI-971	SI-15000	SI-20000
Part No.	AAA31511	AAA31512	AAA31513	AAA31511	AAA31512



Please visit **JEIOTECH.com**

For further information on JEIOTECH's incubator products information is readily available on our website.

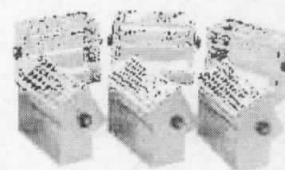
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Microplate Holders



Lab Sticker



Test Tube Racks

Test Tube Racks

Easy to release and mount racks made of durable stainless steel with adjustable angle and tube height support. Test tube racks are used with an optional universal platform.

Cat. No.	Description	Tube Dia.	Mountable Capacity of Racks				
			SI-300(R)	SI-600(R)	IS-971(R/F)	SIF-5000 Series	SIF-6000 Series
AAA23581	for 86 test tubes	8mm dia. (0.3")					
AAA23582	for 86 test tubes	10mm dia. (0.4")					
AAA23583	for 58 test tubes	12mm dia. (0.5")					
AAA23584	for 58 test tubes	14mm dia. (0.6")					
AAA23585	for 32 test tubes	16mm dia. (0.7")	2EA	4EA	6EA	2 EA	4 EA
AAA23586	for 19 test tubes	25mm dia. (1.0")					
AAA23594	for 10 test tubes	35mm dia. (1.4")					

* No declination

* We can manufacture other size of test tube racks to meet your specific requirements. Contact us for details.

Microplate Holders

Available in three styles: tower type, flat type (small and large), and single type. Tower type holder is for 10 standard or deep well plates. Large flat holder is for 4 standard or deep well plates. Small flat holder is for 3 standard or deep well plates. Single type holder is for 1 standard or deep well plate. (standard well plates' height: 14.7mm)

Cat. No.	Mountable Capacity			
	AAA23651	AAA23652	AAA23653	AAA23654
SI-300(R)	5	-	2	7
SI-600(R)	7	2	2	12
IS-971(R/F)	16	3	5	25
SIF-5000 (R)	6	-	2	8
SIF-6000 (R)	10	2	3	15

* Microplate holders need to be mounted on an universal platform which is sold separately.

Lab Sticker

An alternative method for securing vessels to a shaker platform. Ideal for containers such as bottles and dishes that cannot be held on the universal platform with conventional flask clamps. Lab stickers can be regenerated for reuse by washing it with mild detergent and water. It cannot be used in water baths. For safe operation, gradual RPM increase is recommended.

Cat. No.	Description
	Size (mm / inch, WxDxH)
AAA30551	200x200x5 / 7.9x7.9x0.2

* Lab Sticker need to be mounted on an universal platform which is sold separately.



- / Baths & Circulators
- / Desiccators
- / Fume Hoods
- / Furniture
- / Incubators
- / Ovens
- / Pumps
- / Recirculating Coolers (Chillers)
- / Refrigerators & Freezers
- / Shakers
- / Heating & Cooling Blocks
- / Hotplates & Stirrers
- / Vortex Mixers
- / Temperature Chambers
- / Temperature & Humidity Chambers
- / Pipettes
- / Plasticware
- / Ultrasonic Cleaners
- / Other Products



**Lab
Companion**

Best Products for Reliable Results

45

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Příloha č. 2 Kupní smlouvy č. 9770/ 00042
Počet stran: 2

Příloha č. 2: Položkový rozpočet

Ke Konfiguraci 1- CO2 inkubátor

1 ks MCO-170AICUVH-PE

Příslušenství:

1 ks generátor MCO-HP-PW

1 ks redukční ventil

Ke Konfiguraci 2- CO2 inkubátor

1 ks MCO-170AICUVH-PE

Příslušenství:

1 ks generátor MCO-HP-PW

1 ks redukční ventil

Ke konfiguraci 3- Inkubátory:

1 ks IL-11

Příslušenství:

4 ks police EDA8219

1 ks IB-25G

Příslušenství:

4 ks police EDA8137

Na toto místo doplní uchazeč položkový rozpočet kupní ceny dle článku 4.2. této smlouvy.

Položkový rozpočet - celková nabízená cena

Konfigurace 1 - CO2 Inkubátor

Katalogové číslo	počet ks	Jednotková cena bez DPH 21%	Cena celkem bez DPH 21%	DPH 21%	Cena celkem včetně DPH 21%
Inkubátor MCO170AICUVH-PE	1	16985	16985	35696,85	205681,85
generátor MCO-HP-PW	1	9487	9487	1992,27	11479,27
redukční ventil	1	4500	4500	945,00	5445,00
Celkem za položku			183972	38634,12	222606,12

Konfigurace 2 - CO2 inkubátor

Inkubátor MCO170AICUVH-PE	1	136011	136011	28562,31	164573,31
generátor MCO-HP-PW	1	9487	9487	1992,27	11479,27
redukční ventil	1	4500	4500	945,00	5445,00
Celkem za položku			149998	31499,58	181497,58

Konfigurace 3 - Inkubátory

IL-11	1	51156	51156	10742,76	61898,76
Police EDA8219	4	1200	4800	1008,00	5808,00
IB-25G	1	34242	34242	7190,82	41432,82
Police EDA8137	4	1200	4800	1008,00	5808,00
Celkem za položku			94998	19949,58	114947,58

CENA CELKEM BEZ DPH

DPH 21%

CENA CELKEM VČETNĚ DPH

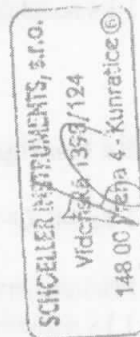
Ceny jsou uvedeny v Kč.

Ing. Pavel Břicháček, jednatel
SCHOELLER INSTRUMENTS, s.r.o.

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