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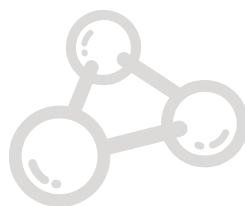
Since 1982

VISION SCIENTIFIC

LABORATORY INSTRUMENTS

For Research and Testing


SCIENTIFIC



Greetings

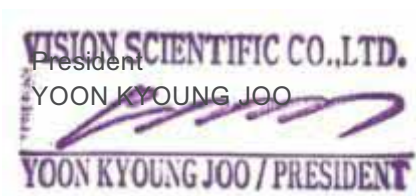
VISION SCIENTIFIC CO.,LTD was founded in 1982.

We are the Leading-Manufacturer in Bio and Medical instruments in the field of basic for Laboratory and Medical Industry.

For Customer satisfaction,

VISION SCIENTIFIC CO.,LTD have taken GMP for Medical instrument Quality Management System, ISO9001 for Quality Management System, ISO14001 for Environment Quality Management system and ISO13485 for Medical instruments Management System Certificate.

VISION SCIENTIFIC CO.,LTD will do our best for having excellent Competition Power with all staves and high quality items.





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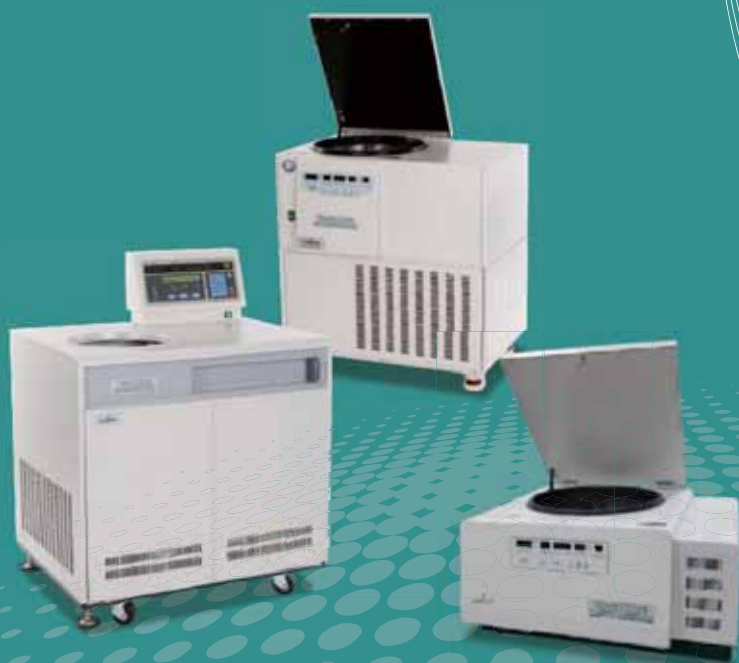


CENTRIFUGE

01

Vision Scientific

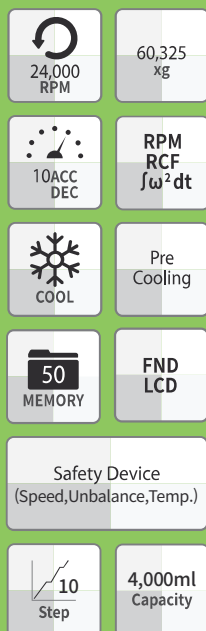
CENTRIFUGE



High Speed Refrigerated Centrifuge

VS-24SMTi

- / Max. 24,000RPM & 60,325×g
- / Large Capacity(4,000ml) can be worked at once.
- / All Information can be checked well because Real Status are shown on FND, Setting Value are shown on LCD Display.
- / 10 Steps Programs for various test condition.
- / Chamber Pre-cooling
- / Taper Type Shaft for easy Install and Deinstall
- / Trustworthy Safety Device
- / CE, KGMP, ISO9001, ISO14001 and ISO13485 Certificate



Standard Items

Main Body

Level

Power Cable

Manual

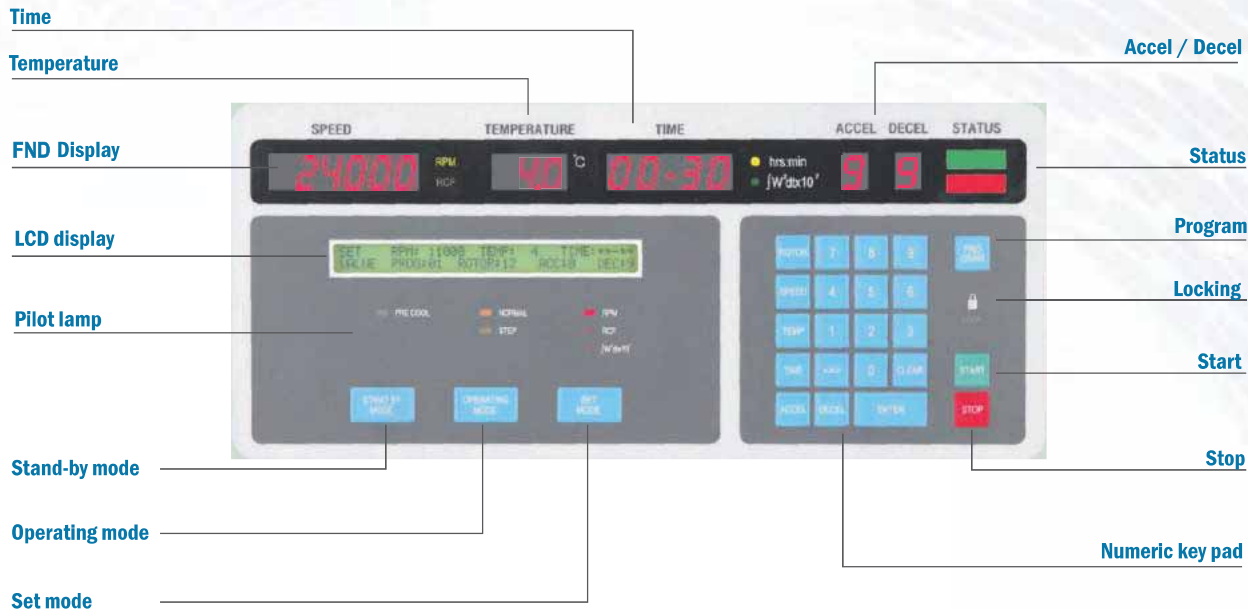
High Speed Refrigerated Centrifuge	VS-24SMTi
Max. RPM	24,000RPM (Angle rotor)
Max. RCF	60,325Xg (Angle rotor)
Max. Capacity	6000ml, 1000ml x 6 Tubes
Display	Dual Display, LCD & FND
Operating mode	RPM, RCF & $\int \omega^2 dt$
Step Mode	10 step program
Program memory	20 memory (OPTION) 50 memory
Drive system	Inverter motor drive
Acceleration	10 profiles
Deceleration	10 profiles
Timer	99Hr, 59min, & Hold for long run
Pre-Condition	Pre-cooling
Temp. Range	-20°C to 40°C
Safety system	Over speed protector, Unbalance detector,
	Temp. Protector, locking system, Revolving counter,
	Self test device
Dimension	645×960×1,220(H)mm
Weight	230Kg
Power	220V, 2.5Kw, 60Hz

※There are not included Rotor and Tubes. Customer should take suitable rotor and tubes separately.



Control Panel Layout

Setting value are shown on Back-light LCD, Real status are shown on FND Display to be checked well.



STAND BY MODE

This is the mode to be made set low Temperature in advance.(PRE-COOLING)

OPERATING MODE

Unit can be working on Normal and Step Programming mode depends on test condition.

Normal Mode If speed, Temperature, Timer and etc, unit is stopped after time is over.
Step Mode Speed and using time can be set by 10 steps program.

SET MODE

Unit can be working by below 3 conditions

RPM REVOLUTION PER MINUTES
RCF RELATIVITY CENTRIFUGAL FORCE
 ω^2dt Total Centrifugal Power.(Integral Omega Dt).
Equal test result can be gotten irrespective of Centrifuge kinds or Rotor.



VS-24SMTI			
Model	Max. RPM	Max. RCF	Number of Tubes
V1,524A	24,000	51,517xg	1,5ml×24
V1012A	24,000	50,873xg	10ml×12
V1024A	22,000	50,323xg	10ml×24
V1512A	21,000	54,727xg	15ml×12
V1524A	17,000	38,126xg	15ml×24
V308A	23,000	53,228xg	30ml×8
V508A	23,000	60,325xg	50ml×8
V8506A	20,000	44,273xg	85ml×6
V8508A	17,000	35,218xg	85ml×8
V2504A	13,000	23,807xg	250ml×4
V2506A	12,000	22,378xg	250ml×6
V5004A	11,000	21,374xg	500ml×4
V5006A	9,000	14,670xg	500ml×6
V10004A	8,000	11,806xg	1000ml×4
V10006A	7,000	10,792xg	1000ml×6
V506AC	15,000	25,155xg	50ml×6
V1512AC	15,000	24,903xg	15ml×12

※ Ask about V10006A separately

▪ Rotor

for High Speed Refrigerated Centrifuge



Fixed Angle Rotor

Fixed Angle Rotor for VS-24SMTi

<p>1000ml</p>  <p>V10006A (Ask it) 1,000ml × 6tubes 7,000RPM, 10,792xg R197mm</p> <p>V10004A 1,000ml × 4tubes 8,000RPM, 11,806xg R165mm</p> 	<p>500ml</p>  <p>V5006A 500ml × 6tubes 9,000RPM, 14,670xg R162mm</p> <p>V5004A 500ml × 4tubes 11,000RPM, 21,374xg R158mm</p> 	<p>250ml</p>  <p>V2506A 250ml × 6tubes 12,000RPM, 22,378xg R139mm</p> <p>V2504A 250ml × 4tubes 13,000RPM, 23,807xg R126mm</p> 	<p>50ml – 30ml</p>  <p>V508A 50ml × 8tubes 23,000RPM, 60,325xg R102mm</p> <p>V308A 30ml × 8tubes 23,000RPM, 53,228xg R90mm</p> 	<p>50ml – Conical</p>  <p>V506AC 50ml × 6tubes 15,000RPM, 25,155xg R100mm</p> 
<p>85ml</p>  <p>V8506A 85ml × 6tubes 20,000RPM, 44,273xg R99mm</p> <p>V8508A 85ml × 8tubes 17,000RPM, 35,218xg R109mm</p> 	<p>15ml</p>  <p>V1512A 15ml × 12tubes 21,000RPM, 54,727xg R111mm</p> <p>V1524A 15ml × 24tubes 19,000RPM, 48,028xg R119mm</p> 	<p>15ml – Conical</p>  <p>V1512AC 15ml × 12tubes 15,000RPM, 24,943xg R99mm</p> 	<p>10ml</p>  <p>V1012A 10ml × 12tubes 24,000RPM, 50,873xg R79mm</p> <p>V1024A 10ml × 24tubes 22,000RPM, 50,323xg R93mm</p> 	<p>1.5ml</p>  <p>V1.524A 1.5ml × 24tubes 24,000RPM, 51,517xg R80mm</p> 

※There are not included Rotor and Tubes. Customer should take suitable rotor and tubes separately.

▪ Guide for Centrifuge Selection

Materials to be Isolated	Specific Application	Centrifuge Typically Used
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Preparative Centrifugation		Ultra centrifuge VS-65K	Super speed vacuum centrifuge VS-30000i	High speed refrigerated centrifuge VS-24SMTI	Micro high speed centrifuge VS-180CFI
Proteins	Ammonium sulfate precipitates	●	●	●	●
	Sucrose/glycerol gradient isolation	●			
	Centrifugal filtration			●	●
Lipoproteins	Fractionation by flotation	●			
	Density gradient fractionation	●	●		
Subcellular Fractions					
Chromatin/Nucleosomes	Sucrose gradient isolation	●	●	●	
	Pelleting	●	●		
Microsomes	Sucrose gradient isolation	●	●		
	Microsomal membrane fractionation	●	●		
Mitochondria	Pelleting	●	●	●	
	Sucrose gradient isolation	●	●		
Nuclei	Pelleting	●	●	●	
	Pelleting	●	●	●	
Membranes	Sucrose/Percoll gradient fractionation	●	●	●	
	Binding studies	●	●	●	●
Ribosomes/Polysomes	Pelleting	●	●	●	
	Size fractionation in sucrose gradients	●	●	●	
Cytosol	Clarification	●	●	●	
Lysates/Homogenates	Clearing debris and large particles	●	●	●	
Nucleic Acid					
DNA	Alcohol precipitation		●	●	●
	Phenol/CHCl ₃ extraction		●	●	●
	Plasmid purification in CsCl	●			
RNA	Size fractionation in sucrose gradients	●			
	Phenol/CHCl ₃ extraction		●	●	●
	Alcohol precipitation		●	●	●
	Lithium precipitation		●	●	●
	Pelleting in CsCl	●			
	CSTFA density gradient	●			
Cells	Isolation of mononuclear cells on			●	
	Ficoll-Hypaque		●	●	
	Pelleting bacteria		●	●	
	Pelleting mammalian cells		●		
	Elutriation of viable cells		●	●	
Viruses	Other density gradient separations		●	●	
	Pelleting	●	●	●	
	PEG precipitates	●	●	●	
	Density gradient isolations	●	●		

Super Speed Vacuum Centrifuge

VS-30000i

- / Max. 30,000RPM & 94,583Xg
- / Easy Loading & Self Locking System
- / Real Speed is shown on FND, Setting value is shown on LCD Display
- / Chamber Pre-cooling
- / Bio-Hazard Safe Rotor
- / Trustworthy Safety Device
- / EM, KGMP, ISO9001, ISO14001, ISO13485 Certificate

Standard items

Main Body
Level
Power Cable
Manual

Super Speed Vacuum Centrifuge	VS-30000i
Max. RPM	30,000RPM
Max. RCF	94,583xg
Max. Capacity	1,500ml, 250ml x 6 tubes
Display	Dual Display, LCD&FND
Operating mode	RPM, RCF, $f \omega^2 dt$
Step Mode	10Step Program
Program Memory	20 memory (OPTION) 50 memory
Drive system	Inverter Motor drive Self-Centering Drive System
Acceleration	10 profiles
Deceleration	10 profiles
Timer	99Hr, 59min, & Hold for long run
Temp Range	-20°C to 40°C
Safety system	Over speed protector, Unbalance detector, Temperature Limit detector, Door detector, Locking System, Revolving counter, Self test device
Dimension	958 x 740 x 1,237(H)mm
Weight	290Kg
Power	220V, 2.4Kw, 60Hz

※There are not included Rotor and Tubes. Customer should take suitable rotor and tubes separately.



■ Rotor For Vacuum Centrifuge

Easy to loading Type of Bio-Safety Rotor System



Fixed Angle Rotor for VS-30000i

13.5ml



V1308AU

13.5ml × 8tubes
30,000RPM, 78,484xg
R78mm

V1312AU

13.5ml × 12tubes
25,000RPM, 66,381xg
R95mm



38.5ml



V3808AU

38.5ml × 8tubes
30,000RPM, 93,577xg
R93mm



94ml



V9406AU

94ml × 6tubes
20,000RPM, 46,956xg
R105mm



10ml



V1012AS

10ml × 12tubes
30,000RPM, 80,496xg
R80mm

V1024AS

10ml × 24tubes
20,000RPM, 49,639xg
R111mm



15ml



V1512AS

15ml × 12tubes
24,000RPM, 65,685xg
R102mm

V1524AS

15ml × 24tubes
20,000RPM, 57,689xg
R129mm



250ml



V2504AS

250ml × 4tubes
15,000RPM, 29,180xg
R116mm

V2506AS

250ml × 6tubes
12,000RPM, 21,412xg
R133mm



50ml – 30ml



V508AS

50ml × 8tubes
30,000RPM, 94,583xg
R94mm

V308AS

30ml × 8tubes
30,000RPM, 90,558xg
R90mm



1.5ml



V1.524AS

1.5ml × 24tubes
30,000RPM, 80,496xg
R80mm



Excellent Machine

EM Mark is "Excellent Machine" is given to excellent machine by National Technical Assistance. VS-30000i was first centrifuge for EM Machine all over the Korea.



Ultra Speed Centrifuge

VS-65K

- / Max. 65,000RPM & 344,819×g
- / Real speed is shown on FND, setting value is shown on LCD Display.
- / Bio-Hazard Safety Rotor
- / Chamber Pre-cooling
- / Various Titanium and Duralumin Rotor
 - VS-65K, VS-75K(Titanium)
 - VS-35K, VS-45K, VS-55K(Duralumin)
- / Trustworthy Safety device
- / ISO9001, ISO14001, ISO13485 Certificate

65,000 RPM	344,819 ×g
9 ACC DEC	RPM RCF $f \omega^2 dt$
COOL	Pre Cooling
20 MEMORY	FND LCD
VACUUM	1,500ml Capacity
Safety Device (Speed, Unbalance, Temp.)	

Standard items

Main Body
Level
Vacuum Grease
Power Cable
Manual

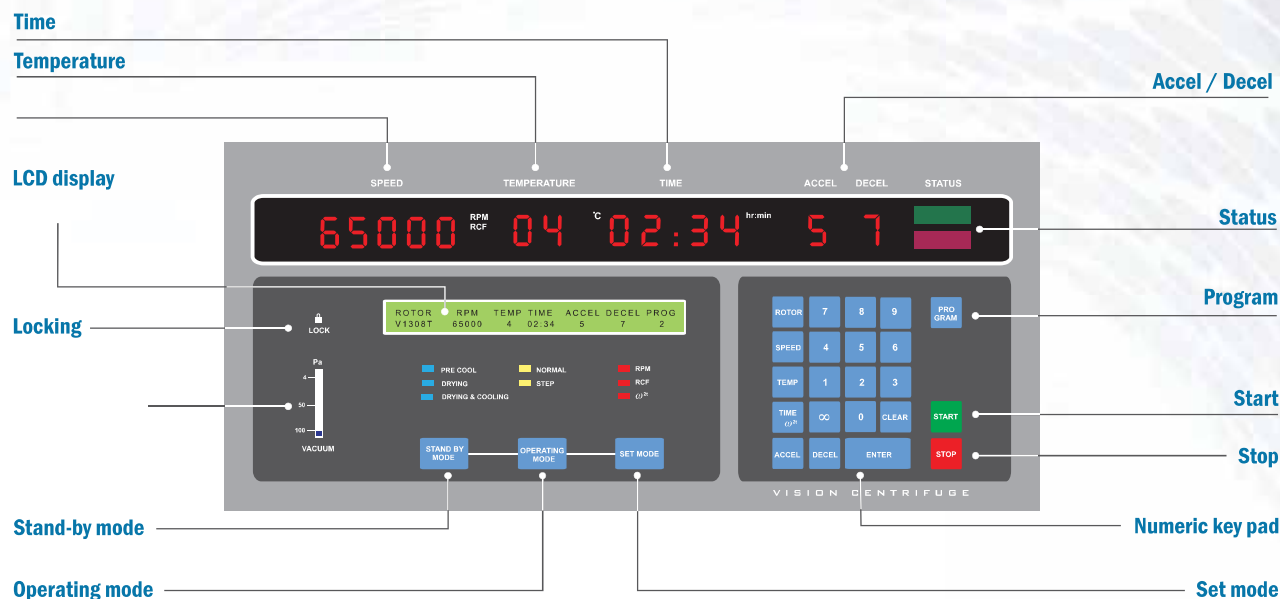
Ultra Speed Centrifuge	VS-35K	VS-45K	VS-55K	VS-65K	VS-75K
Max. RPM	35,000RPM	45,000RPM	55,000RPM	65,000RPM	75,000RPM
Max. RCF	99,977×g	165,268×g	246,882×g	344,819×g	459,078×g
Max. Capacity	1,500ml, 250ml×6Tubes				
Display	Dual Display, LCD & FND				
Operating mode	RPM, RCF & $f \omega^2 dt$				
Step Mode	10 Step Program				
Program memory	20 memory (OPTION) 50 memory				
Drive system	Inverter motor drive				
Rotor Recognition	Automatic Rotor identification				
Acceleration	9 profiles				
Deceleration	9 profiles				
Timer	99Hr, 59min, & Hold for long run				
Pre-Condition	Pre-cool, drying & dry cooling				
Temp. Range	0°C to 40°C				
Vacuum	Below 4Pascal				
Safety system	Over speed protector, Unbalance detector,				
	Temperature Limit detector, Door detector				
Weight	450kg				
Dimension	960×740×1,240(H)mm				
Power	220V, 4Kw, 60Hz				

※There are not included Rotor and Tubes. Customer should take suitable rotor and tubes separately.



Control Panel Layout

Real working value are shown on FND display, setting value are shown on Back lit LCD Dsplay.



STAND BY MODE

Available setting the best condition by below mode in advance.

Pre cool	Keeping chamber on low temperature in advance
Drying	Drying chamber in advance
Drying & Cooling	After chamber drying, keeping chamber on low temperature

OPERATING MODE

Normal mode and step mode are available after setting operation method.

Normal Mode	If using condition like speed, temperature and time are set, working is stopped after time is over.
Step Mode	10 steps program for speed and time are available

SET MODE

Setting of using speed is available by below 3 mode.

RPM (Revolution Per Minute)	Available setting by RPM Mode
RCF (Relativity Centrifugal Force)	Available setting by RCF Mode
$\int \omega^2 dt$ (Integral Omega dt)	Available setting by Total centrifugal power. Equal test result can be gotten irrespective of Centrifuge kinds or rotor kinds.



VS-65K			
Model	Max. RPM	Max. RCF	Number of Tubes
V0508Ti	65,000	338,206xg	5ml×8
V1308Ti	65,000	344,819xg	13.5ml×8
V1312Ti	50,000	257,140xg	13.5ml×12
V3808Ti	45,000	224,131xg	38.5ml×8
V9406Ti	30,000	104,444xg	94ml×6
V2506Ti	19,000	46,817xg	250ml×6

▪ Rotor & Tubes for Ultra Centrifuge



Fixed Angle Rotor, Ultra Speed, Titanium Alloy

VS-35K

Model	Max.RPM	Max.RCF	Tubes	Places	Volume	Radius	Material
V0508AUI	35,000	98,060×g	5ml	8	40ml	7.16cm	Aluminum Alloy
V1308AUI	35,000	99,977×g	13.5ml	8	108ml	7.3cm	Aluminum Alloy
V1312AUI	25,000	64,285×g	13.5ml	12	162ml	9.2cm	Aluminum Alloy
V3808AUI	23,000	58,551×g	38.5ml	8	308ml	9.9cm	Aluminum Alloy
V9406AUI	21,000	51,276×g	94ml	6	564ml	10.4cm	Aluminum Alloy
V2506AUI	19,000	46,817×g	250ml	6	1,500ml	11.6cm	Aluminum Alloy

VS-45K

Model	Max.RPM	Max.RCF	Tubes	Places	Volume	Radius	Material
V0508AUI	45,000	162,098×g	5ml	8	40ml	7.16cm	Aluminum Alloy
V1308AUI	45,000	165,268×g	13.5ml	8	108ml	7.3cm	Aluminum Alloy
V1312AUI	32,000	105,325×g	13.5ml	12	162ml	9.2cm	Aluminum Alloy
V3808AUI	30,000	99,613×g	38.5ml	8	308ml	9.9cm	Aluminum Alloy
V9406AUI	25,000	72,670×g	94ml	6	564ml	10.4cm	Aluminum Alloy
V2506AUI	19,000	46,817×g	250ml	6	1,500ml	11.6cm	Aluminum Alloy

VS-55K

Model	Max.RPM	Max.RCF	Tubes	Places	Volume	Radius	Material
V0508AUI	55,000	242,147×g	5ml	8	40ml	7.16cm	Aluminum Alloy
V1308AUI	55,000	246,882×g	13.5ml	8	108ml	7.3cm	Aluminum Alloy
V1312AUI	35,000	125,998×g	13.5ml	12	162ml	9.2cm	Aluminum Alloy
V3808AUI	30,000	99,613×g	38.5ml	8	308ml	9.9cm	Aluminum Alloy
V9406AUI	25,000	72,670×g	94ml	6	564ml	10.4cm	Aluminum Alloy
V2506AUI	19,000	46,817×g	250ml	6	1,500ml	11.6cm	Aluminum Alloy

VS-65K

Model	Max.RPM	Max.RCF	Tubes	Places	Volume	Radius	Material
V0508Ti	65,000	338,206×g	5ml	8	40ml	7.16cm	Titanium Alloy
V1308Ti	65,000	344,819×g	13.5ml	8	108ml	7.3cm	Titanium Alloy
V1312Ti	50,000	257,140×g	13.5ml	12	162ml	9.2cm	Titanium Alloy
V3808Ti	45,000	224,131×g	38.5ml	8	308ml	9.9cm	Titanium Alloy
V9406Ti	30,000	104,644×g	94ml	6	564ml	10.4cm	Titanium Alloy
V2506AUI	19,000	46,817×g	250ml	6	1,500ml	11.6cm	Aluminum Alloy

VS-75K

Model	Max.RPM	Max.RCF	Tubes	Places	Volume	Radius	Material
V0508Ti	75,000	450,274×g	5ml	8	40ml	7.16cm	Titanium Alloy
V1308Ti	75,000	459,078×g	13.5ml	8	108ml	7.3cm	Titanium Alloy
V1312Ti	55,000	311,139×g	13.5ml	12	162ml	9.2cm	Titanium Alloy
V3808Ti	45,000	224,131×g	38.5ml	8	308ml	9.9cm	Titanium Alloy
V9406Ti	30,000	104,644×g	94ml	6	564ml	10.4cm	Titanium Alloy
V2506AUI	19,000	46,817×g	250ml	6	1,500ml	11.6cm	Aluminum Alloy

Tubes for Ultra Centrifuge

Model	Capacity	Dimension	Type Material	Cap
326819	5.0ml	13×51mm	Polyallomer	Not Required
344057	5.0ml	13×51mm	Ultra Clear	
342413	13.5ml	16×76mm	Quick Seal Polyallomer	Aluminium spacer [342695]
344322	13.5ml	16×76mm	Quick Seal Ultra Clear	Ultra Clear Aluminium spacer [342695]
326814	13.5ml	16×76mm	Polyallomer	Titanium Cap [341968] or Aluminium Cap [330860]
344085	13.5ml	16×76mm	Ultra Clear	Titanium Cap [341968] or Aluminium Cap [330860]
326823	38.5ml	25×89mm	Polyallomer	Aluminium Cap [331151]
344058	38.5ml	25×89mm	Ultra Clear	Aluminium Cap [331151]
345776	94ml	38×102mm	Quick Seal Polyallomer	Titanium spacer [342697]
345778	94ml	38×102mm	Quick Seal Ultra Clear	Titanium spacer [342697]
345775	94ml	38×102mm	Polyallomer	Aluminium Cap [330901]
345777	94ml	38×102mm	Ultra Clear	Aluminium Cap [330901]

※There are not included Rotor and Tubes. Customer should take suitable rotor and tubes separately.

※Tube can be changed without notice for better quality.

※-Ti : Titanium,

-AUI : Duralumin

Large Capacity Centrifuge

VS-1000

- / Full color Touch screen to be used easy
- / Automatic Door system (Motorized Door)
- / Max. 5,000RPM, 7,406 x g
- / 1,000ml x 6 Tubes are available at once
- / Wind shield chamber to be minimized wind resistance
- / Automatic Calculation for RPM and RCF

Large Capacity Centrifuge	VS-1000
Max. RPM	5,000 RPM
Max. RCF	7,406 × g
Max Capacity	6,000ml, 1,000ml × 6 Tubes
Display	Full Color Touch Screen
Operating mode	RPM, RCF & $\int \omega^2 dt$
Program memory	10 Memories
Drive system	Inverter motor drive
Door system	Motorized Door System
Acceleration	9 Profiles
Deceleration	9 Profiles
Timer	99 Hr 59 Min & 59 Sec & Hold for Long Run
Temp. Range	-20°C ~ +40°C
Safety system	Protector for Over speed,
	Detector for Temperature and Door,
	Self Test Device
Material	Stainless : Rotor, Chamber
	Aluminium : Wind Shield Chamber, Buckets
	Exterior : Steel with Powder coating
Dimension	840 x 900 x 880(H)mm
Weight	380Kg
Power	220V, 3.4Kw, 60Hz

Tube Rack

Mode	R1000-1	R500-1	R250-1	R94-1	R50-7	R15-19	R10-24	R5-30	R50-5C	R15-14C	RBC-1000	Sealing Cap
Tube	1000ml	500ml	250ml	94ml	50ml	15ml	10ml	5ml	C50ml	C15ml	Bag	Aerosol Tight
Places	1	1	1	1	7	19	24	30	5	14	1	Optional
Tube Dim. ø x Lmm	96x188	70x170	62x128	38x102	29x104	16x144	14x100	10x75	30x115	17x120	—	Item



5,000
RPM

Color
Touch
Screen

9ACC
DEC

Wind
Shield
Chamber

COOL

6,000ml
Capacity

10
MEMORY

Pre
Cooling

7,406
xg

RPM
RCF
 $\int \omega^2 dt$

Safety Device
(Speed, Unbalance, Temp.)

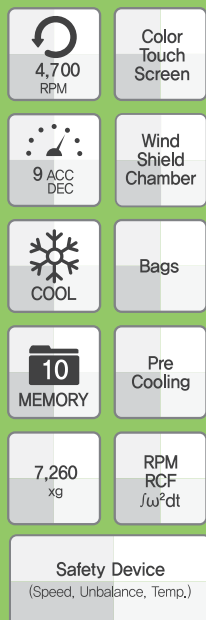
Standard items

Main Body
 Wind Shield Chamber
 VR-10S Swing Rotor
 VC-10 Bucket
 R15-19 Tube Rack
 Power Cable
 Manual

Large Capacity Centrifuge

VS-2000

- Full color Touch screen to be used easy
- Automatic Door system (Motorized Door)
- Max. 4,700RPM, 7,260Xg
- Wind shield chamber to be minimized wind resistance
- Automatic Calculation for RPM and RCF



Large Capacity Centrifuge	VS-2000
Max. RPM	4,700 RPM
Max. RCF	7,260 × g
Max Capacity	500ml x 12 Bags
Display	Full Color Touch Screen
Operating mode	RPM, RCF & $f \cdot \omega^2 \cdot dt$
Program memory	10 memories (OPTION) 50 memories
Drive system	Inverter motor drive
Door system	Motorized Door System
Acceleration	9 Profiles
Deceleration	9 Profiles
Timer	99Hr, 59Min, 59Sec. & Hold for Long Run
Temp. Range	-20°C ~ +40°C
Safety system	Protector for Over speed,
	Detector for Temperature and Door, Unbalance Detector
	Self Test Device
Material	Stainless : Rotor, Chamber
	Aluminium : Wind Shield Chamber, Buckets
	Exterior : Steel with Powder coating
Dimension	840 x 913 x 920(H)mm
Weight	380Kg
Power	220V, 5.4Kw, 60Hz

Standard items

Main Body
Wind Shield Chamber
VR-20S Swing Rotor
VC-20 Bucket
Carrier
Power Cable
Manual



WIND SHIELD CHAMBER



BUCKET



VC-20

SWING OUT ROTOR

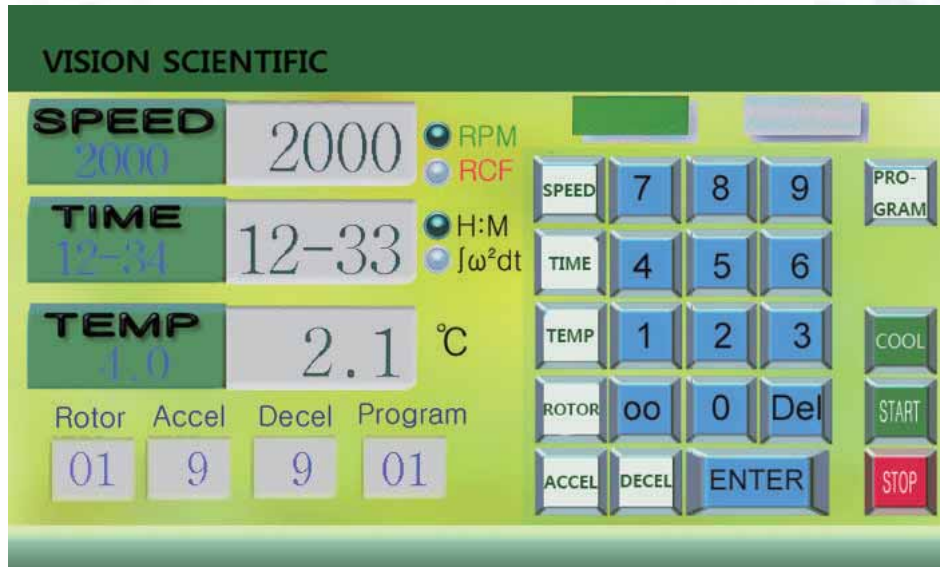


VR-20S

CARRIER



▪ Control Panel Layout (Full Color Touch Screen)



✓ Operation Mode

RPM : Revolution Per 1 Min

R C F : Relativity Centrifugal Force

$\int \omega^2 dt$: Integral Omega dt

✓ Full Color Touch Screen Controller

✓ Error message and status are shown on Touch screen display

✓ Acceleration and Deceleration system depends on test purpose

✓ Large capacity Centrifuge System on stable mode



Large Capacity Centrifuge

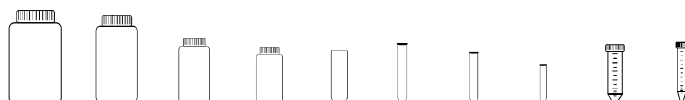
VS-2000

- / Full color Touch screen to be used easy
- / Automatic Door sytem (Motorized Door)
- / Max. 4,500 RPM, 5,455 x g
- / 1,000 ml x 6 Tubes are available at once
- / Automatic Calculation for RPM and RCF

Large Capacity Centrifuge	VS-2000
Max. RPM	4,500 RPM
Max. RCF	5,455 × g
Max Capacity	6,000 ml, 1,000ml × 6 Tubes
Display	Full Color Touch Screen
Operating mode	RPM, RCF & $\int \omega^2 dt$
Program memory	10 Memories
Drive system	Inverter motor drive
Door system	Motorized Door System
Acceleration	9 Profiles
Deceleration	9 Profiles
Timer	99 Hr 59 Min & 59 Sec & Hold for Long Run
Temp. Range	-20°C ~ +40°C
Safety system	Protector for Over speed, Unbalance detector,
	Detector for Temperature and Door,
	Self Test Device
Material	Stainless : Rotor, Chamber
	Aluminium : Buckets
	Exterior : Steel with Powder coating
Dimension	840 x 900 x 880(H)mm
Weight	350Kg
Power	220V, 5 Kw, 50Hz

Tube Rack

Model	R1000-1	R500-1	R250-1	R94-1	R50-7	R15-19	R10-24	R5-30	R50-5C	R15-9C	RBC-2000
Tube	1000ml	500ml	250ml	94ml	50ml	15ml	10ml	5ml	C 50ml	C 15ml	Blood Bag Carrier
Places	1	1	1	1	7	19	24	30	5	9	2
Tube Dim.ø x Lmm	98x188	70x170	62x128	38x102	29x104	16x144	14x100	10x75	30x115	17x120	Blood Bag



WIND SHIELD CHAMBER



BUCKET



VC-20

SWING OUT ROTOR



VR-20S



4,500 RPM

Color Touch Screen

9ACC DEC

Motorized Door System

COOL

10,590ml Capacity

10 MEMORY

Pre Cooling

5,455 xg

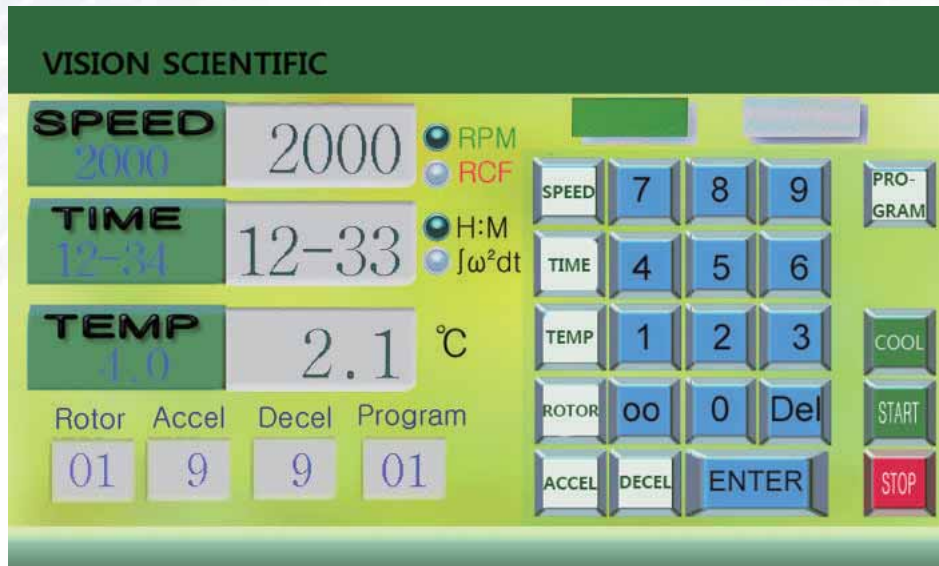
RPM RCF $\int \omega^2 dt$

Safety Device (Speed, Unbalance, Temp.)

Standard items

Main Body
 Wind Shield Chamber
 VR-20S Swing Rotor
 VC-20 Bucket
 RBC-2000 Carrier
 Power Cable
 Manual

▪ Control Panel Layout (Full Color Touch Screen)



/ Operation Mode

RPM : Revolution Per 1 Min

R C F : Relativity Centrifugal Force

$\int \omega^2 dt$: Integral Omega dt

/ Full Color Touch Screen Controller

/ Error message and status are shown on Touch screen display

/ Acceleration and Deceleration system depends on test purpose

/ Large capacity Centrifuge System on stable mode



High Speed Refrigerated Centrifuge

VS-18000M

- / 1.5ml Micro Tube ~ 50ml Tube are available
- / Microprocessor Control
- / Inverter Motor (Low noise and maintenance)
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety device
- / Easy to use
- / Refrigerated device for Low noise
- / Combo Rotor (VR-C1) is available
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate



18,000 RPM	23,545 xg
2ACC 3DEC	FND
COOL	300 ml Capacity
20 MEMORY	Pre Cooling
Floor Type	RPM RCF ∫ ω²dt
Safety Device (Speed, Unbalance, Temp.)	

High Speed Refrigerated Centrifuge	VS-18000M
Max. RPM	18,000RPM
Max. RCF	23,545×g
Max Capacity	300ml, 50ml×6Tubes
Main Controller	Microprocessor Controller
Display	7-Segment FND Display
Operating mode	RPM / RCF
Program memory	20 memory OPTION) 50 memory
Timer	99Hr, 59min, & Hold for long run
Temp. Range	-20℃ to 40℃
Drive system	Inverter motor drive
Acceleration	Fast / Slow
Deceleration	Fast / Normal / Slow
Safety system	Over speed protector Temp. protector
	Unbalance detector, Door locking
Dimension	423×432×825(H)mm
Weight	73Kg
Power	220V, 1Kw, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Micro Tube-1.5ml	Round / Oakridge	Round / Oakridge	Micro & PCR Tube	Conical Tube
V1,518A-18 1.5ml×18tubes 18,000RPM, 23,545xg R65mm	V1012A-18 10ml×12tubes 15,000RPM, 22,640xg R90mm	V306A-18 30ml×6tubes 12,000RPM, 15,694xg R95mm V506A-18 50ml×6tubes 10,000RPM, 20,817xg R95mm V308A-18 30ml×8tubes 10,000RPM, 11,180xg R100mm	VR-C1combo 1.5ml×30tubes 0.4ml×32tubes 13,500RPM 20,172xg R99mm	V506AC-18 50ml×6tubes 10,000RPM, 11,292xg R101mm V1512AC-18 15ml×12tubes 10,000RPM, 20,817xg R100mm

Standard items

Main Body
Angle Rotor V1.524A-18
Power cable
Manual

Micro High Speed Refrigerated Centrifuge

VS-180CFi

- / Microprocessor Control
- / One touch Spin Down Function(Short Spin)
- / Inverter Motor (Low Noise and Maintenance)
- / Automatic Rotor Recognition function for Each Rotor
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety Device
- / Ergonomic Design
- / Easy to use

Micro High Speed Refrigerated Centrifuge	VS-180CFi
Max. RPM	18,000 RPM(1.5ml × 18 tubes)
Max. RCF	23,545 × g(1.5ml × 18 tubes)
Max. Capacity	54ml, 1.5ml × 36 Tubes
Controller	Microprocessor Control
Display	7-Segment FND Display
Operating Mode	RPM / RCF / Spin Down
Acceleration	Fast / Slow
Deceleration	Fast / Normal / Slow
Timer	99min, 59sec, & Hold for Long Run
Temp. Range	-20°C to 40°C
Safety Device	Over Speed Protector, Door Locking, Over/Under Temp, Protector
Program Memory	20 memory OPTION) 50 memory
Dimension	368 × 584 × 388(H)mm
Weight	40kg
Power	220V, 400W, 60Hz

※There are not included Test tubes. Customer should ask or take suitable tubes separately.

Option



Fixed-angle Rotor
V1.518MA
1.5ml × 18tubes, 18,000RPM
R65mm, 23,545xg



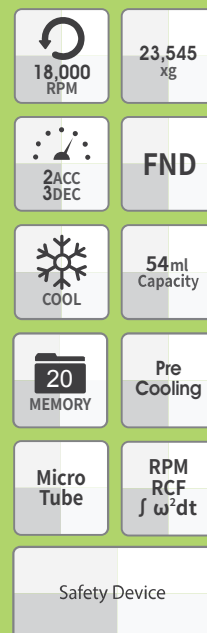
Horizontal Rotor
V1.536MH
1.5ml × 36tubes, 12,000RPM
R65mm, 10,464xg



Fixed-angle Rotor
V1.524MA
1.5ml × 24tubes, 15,000RPM
R80mm, 20,124xg



Swing-out Rotor
V1.516MS
1.5ml × 16tubes, 12,000RPM
R65mm, 10,464xg









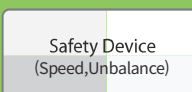

Standard Items

Main Body
Rotor V1.524MA
Power Cable
Manual

Micro High Speed Centrifuge

VS-15000i

- / Microprocessor Control
- / Inverter Motor(Low Noise and Maintenance)
- / Automatic Rotor Recognition function for each rotor
- / Spin Down function (Option)
- / Trustworthy Safety Device
- / Compact Design with saving space
- / Easy to use
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate

 15,000 RPM	 16,351 xg
 Micro Tube	 36ml Capacity
 RPM RCF	 AIR Cooling
 Safety Device (Speed, Unbalance)	
 FND	

Standard items

Main Body
Rotor V1.518MA
Power Cable
Manual

Micro High Speed Centrifuge	VS-15000i
Max. RPM	15,000RPM (1.5ml × 18tubes)
Max. RCF	16,351×g
Max. Capacity	36ml, 1.5ml×24Tubes
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Operating Mode	RPM
Cooling device	Air cooling
Timer	99min, 59sec. & Hold for long run
Drive system	Inverter Motor drive
Safety Device	Over speed protector, Door Detector
Dimension	255×330×225(H)mm
Weight	10Kg
Power	220V, 140W, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Option



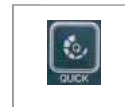
Fixed-angle Rotor

V1.518MA
1.5ml x 18 tubes
15,000 RPM, 16,351xg
R65mm



Fixed-angle Rotor

V1.524MA
1.5ml x 24 tubes
12,000 RPM, 12,879xg
R80mm



Spin/Down function



Multi-Purpose Refrigerated Centrifuge

VS-550

- / Compact Design for saving space
- / Large Capacity 1,000ml can be worked at once(Swing Rotor)
- / Sealing Cap can be blocked the harmful aerosol(Optional)
- / Angle Rotor can be spinning on High Speed(Max.15,000RPM)
- / Microprocessor Control
- / Inverter Motor(Low Noise and maintenance)
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety Device
- / CE, KGMP, ISO9001, ISO14001, ISO13485 Certificate

Multi-Purpose Refrigerated Centrifuge	VS-550
Max. RPM	15,000RPM (Swing 4,500RPM)
Max. RCF	22,640×g (Swing 3,735×g)
Max. Capacity	1000ml, 250ml×4Tubes
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Operating mode	RPM / RCF
Program memory	20 memories (OPTION) 50 memories
Timer	99Hr, 59min, & Hold for long run
Temp. Range	-20℃ to 40℃
Drive system	Inverter motor drive
Acceleration	Fast / Slow
Deceleration	Fast / Normal / Slow
Safety Device	Over speed protector, Temp. protector
	Unbalance detector, Door detector
Dimension	675×555×395(H)mm
Weight	96kg
Power	220V, 1.3Kw, 60Hz




15,000 RPM	22,640 ×g
FND	1,000ml Capacity
RPM RCF	Pre Cooling
20 MEMORY	COOL
2ACC 3DEC	Sealing Cap
Safety Device (Speed, Unbalance, Temp.)	

Standard Items

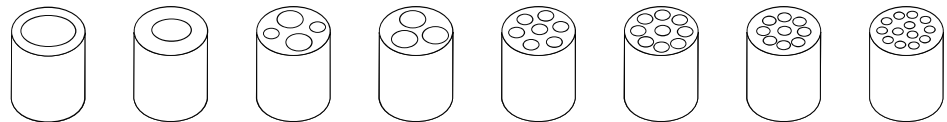
Main Body
 Swing Rotor VR-55S
 Bucket VC-55
 Tube Rack R5015-4CS
 Power cable
 Manual

▪ Rotor

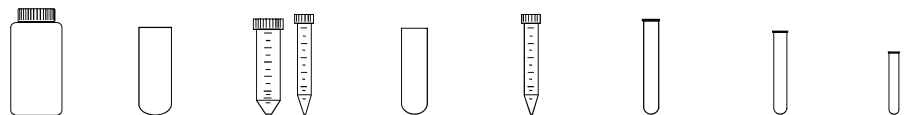
For Multi Purpose Refrigerated Centrifuge

Swing-out Rotor	Option		Micro-plate Rotor
 <p>VR-55S 4,500 RPM, 3,735xg, R165mm</p>	 <p>VC-55 Aluminium Alloy</p>	 <p>VC4-55</p>	 <p>VR-02MS 2,500RPM 1,048xg R150mm 96well Micro-plate x 2EA</p>

Tube Rack



Model	R250-1S	R100-1S	R5015-4CS	R50-3S	R15-7CS	R15-9S	R10-9S	R5-12S
Tube	250ml	100ml	50 & 15ml	50ml	15ml	15ml	10ml	5ml
Places	1	1	4	3	7	9	9	12
ø x L mm	62 x 128	39 x 106	30 x 115	29 x 104	17 x 120	16 x 114	14 x 100	10 x 75



Fixed Angle Rotor for VS-550

Micro & PCR Tube	Micro Tube	Round / Oakridge	Conical Tube-15ml	Conical Tube-50ml	Round / Oakridge
 <p>VR-C1 combo 1.5mlX30tubes, 0.4mlX32tubes, 14,000RPM, 20,172xg R99mm</p>	 <p>V1.524A-55 1.5mlX24tubes, 15,000RPM, 20,376xg, R81mm V308A-55 30mlX8tubes, 14,000RPM, 19,722xg, R90mm</p>	 <p>V1012A-55 10mlX12tubes, 15,000RPM, 22,640xg, R90mm V1512A-55 15mlX12tubes, 14,000RPM, 20,817xg, R95mm V506A-55 50mlX6tubes, 14,000RPM, 21,912xg, R100mm V508A-55 50mlX8tubes, 14,000RPM, 22,351xg R102mm</p>	 <p>V1512AC-55 15mlX12tubes, 10,000RPM, 11,180xg R99.6mm</p>	 <p>V506AC-55 50mlX6tubes, 10,000RPM, 11,236xg R100.5mm</p>	 <p>V8506A-55 85mlX6tubes, 9,000RPM, 9,871xg R109mm</p>

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Multi-tube Carrier Refrigerated Centrifuge

VS-6000CFi

- / 5mlx120tubes can be put at once
- / Large Capacity(3,000ml) can be worked at once (Swing Rotor)
- / Various kinds of Rotor and Rotor and Tube Rack
- / Angle Rotor can be worked on High Speed(Max.11,000RPM)
- / Microprocessor Control
- / Inverter Motor(Low noise and maintenance)
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety Device
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate

Multi-tube Carrier Refrigerated Centrifuge	VS-6000CFi
Max. RPM	11,000RPM (Swing 3,200RPM)
Max. RCF	13,975×g (Swing 2,232×g)
Max. Capacity	3,000ml, 750ml×4Tubes
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Operating mode	RPM / RCF
Programmability	20 memory OPTION) 50 memory
Timer	99Hr, 59min, & Hold for long run
Temp. Range	-20℃ to 40℃
Drive system	Inverter motor drive
Acceleration	Fast / Slow
Deceleration	Fast / Normal / Slow
Safety Device	Over speed protector, Door detector
	Unbalance detector, Temp. protector
Dimension	795×635×433(H)mm
Weight	107Kg
Power	220V, 2Kw, 60Hz



11,000 RPM

13,975 xg

FND

3,000ml Capacity

RPM RCF

Pre Cooling

20 MEMORY

COOL

2ACC 3DEC

Large Capacity

Safety Device (Speed, Unbalance, Temp.)

Standard Items

Main body
 Swing Rotor VR-60S
 Bucket VC-60
 Tube Rack R15-19
 Power cable
 Manual

▪Rotor for VS-6000CFi

Swing-Out Rotor

Fixed Angle Rotor

Swing Out Rotor



VR-60S
Max. RPM 3,200RPM
Max. RCF 2,232xg, R195mm

Bucket



VC-60
Aluminium Alloy

Sealing Cap (Option)



VC4-60

Micro plate



VM-4
Max. RPM 2,500RPM
Max. RCF 1,328xg,
96well Micro Plate
R190mm

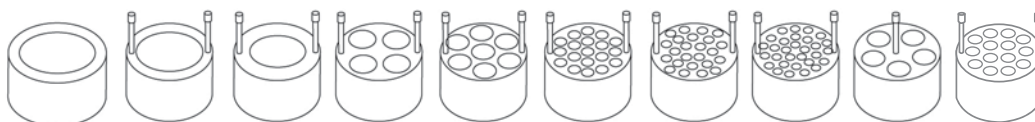
50ml / 15ml



V5010A-60
50ml x 10tubes,
10,000RPM, 13,975xg, R125mm
V506A-60
50ml x 6tubes,
11,000RPM, 13,257xg, R98mm
V1524A-60
15ml x 24tubes,
6,000RPM, 4,971xg, R123.5mm
V508AC-60
50ml x 8tubes, 8,000 RPM, 8,014xg
R112mm

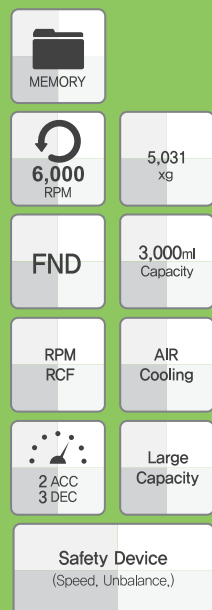
※There are not included Testtubes Customer should ask or take suitable tubes separately

Tube Rack



Model	R750-1	R500-1	R250-1	R85-4	R50-7	R15-19	R10-24	R5-30	R50-5C	R15-10C
Tube	750ml	500ml	250ml	85ml	50ml	15ml	10ml	5ml	C 50ml	C15ml
Places	1	1	1	4	7	19	24	30	5	14
Tube Dim. $\phi \times L$ mm	96 x 130	70 x 170	62 x 128	39 x 106	29 x 104	16 x 114	14 x 100	10 x 75	30 x 115	17 x 120





Standard Items

Main body
Swing Rotor VR-60S
Bucket VC-60
Tube Rack R15-19
Power cable
Manual

Multi-tube Carrier Centrifuge

VS-6000i

- / 5ml x 120 tubes can be put at once
- / Large Capacity (3,000ml) can be worked at once (Swing Rotor)
- / Various kinds of Rotor and Rotor and Tube Rack
- / Angle Rotor can be worked on High Speed (Max. 6,000 RPM)
- / Microprocessor Control
- / Inverter Motor (Low noise and maintenance)
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety Device
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate

Multi-tube Carrier Centrifuge	VS-6000 i
Max. RPM	6,000 RPM (Swing 3,200 RPM)
Max. RCF	5,031 xg (Swing 2,232 xg)
Max. Capacity	3,000ml, 750ml x 4 Tubes
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Operating mode	RPM / RCF
Programmability	20 memory (OPTION) 50 memory
Timer	99Hr, 59min, & Hold for long run
Drive system	Inverter motor drive
Acceleration	Fast / Slow
Deceleration	Fast / Normal / Slow
Safety Device	Over speed protector, Door detector
	Unbalance detector
Dimension	580 x 640 x 420 (H) mm
Weight	55 Kg
Power	220V, 1Kw, 60Hz

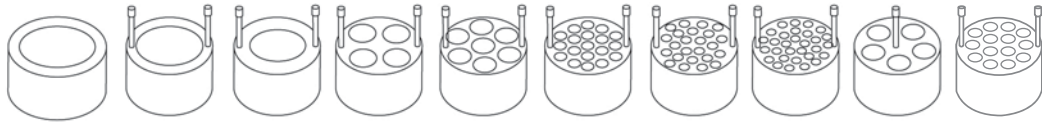


▪Rotor for VS-6000i

Swing-Out Rotor				Fixed Angle Rotor
Swing Out Rotor  VR-60S Max. RPM 3,200RPM Max. RCF 2,232xg, R195mm	Bucket  VC-60 Aluminium Alloy	Sealing Cap (Option)  VC4-60	Micro plate  VM-4 Max. RPM 2,500RPM Max. RCF 1,328xg, 96well Micro Plate R190mm	50ml / 15ml  V5010A-60 50ml x 10tubes, 6,000 RPM, 5,031xg, R125mm V506A-60 50ml x 6tubes, 6,000 RPM, 3,824 xg, R98mm V1524A-60 15ml x 24tubes, 6,000RPM, 4,971xg, R123.5mm V508AC-60 50ml x 8tubes, 6,000 RPM, 4,508xg, R112mm

※There are not included Testtubes Customer should ask or take suitable tubes separately

Tube Rack



Model	R750-1	R500-1	R250-1	R85-4	R50-7	R15-19	R10-24	R5-30	R50-5C	R15-10C
Tube	750ml	500ml	250ml	85ml	50ml	15ml	10ml	5ml	C 50ml	C15ml
Places	1	1	1	4	7	19	24	30	5	19
Tube Dim. ϕ x L mm	96 x 130	70 x 170	62 x 128	39 x 106	29 x 104	16 x 114	14 x 100	10 x 75	30 x 115	17 x 120



Multi Purpose Refrigerated Centrifuge

VS-5500CFi

- / Easy to use the Bucket on Swing Rotor
- / 15ml x32 Tubes are used at once
- / Swing Rotor and Angle Rotor are usable
- / Angle Rotor for High Speed(10,000RPM)
- / Microprocessor Control
- / Inverter Motor(Low Noise and Maintenance)
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety Device
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate

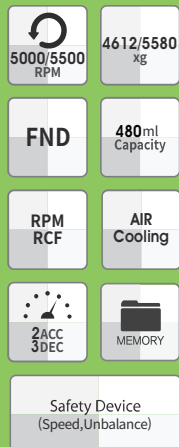
Multi Purpose Refrigerated Centrifuge	VS-5500CFi
Max. RPM	11,000RPM (Swing 5,500RPM)
Max. RCF	13,862×g (Swing 5,580×g)
Max. Capacity	500ml, 50ml×10Tubes
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Operating mode	RPM / RCF
Program Memory	20 memory (OPTION) 50 memory
Timer	99Hr, 59min, & Hold for long run
Temp. Range	-20°C to 40°C
Drive system	Inverter motor drive
Acceleration	Fast / Slow
Deceleration	Fast / Normal / Slow
Safety Device	Over speed protector, Over Temp. protector,
	Door detector, Unbalance detector
Dimension	772×565×848(H)mm
Weight	125Kg
Power	220V, 1Kw, 60Hz



10,000 RPM	13,862 xg
FND	480ml Capacity
RPM RCF	Pre Cooling
2ACC 3DEC	COOL
MEMORY	MULTI
Safety Device (Speed, Unbalance, Temp.)	

Standard items

Main body
Swing Rotor VR-50S
Bucket VB-32
Power cable
Manual



Standard Items

Main body
Swing Rotor VR-50S
Bucket VB-32
Power cable
Manual

※Standard : Steel Door
Option : Colorless Acryl Door

Table-Top Centrifuge

VS-5000i / VS-5500i

- / Easy to Use Swing Rotor
- / 15ml x32Tube are used at once
- / Various Tube Racks and Rotor
- / Compact Design for Saving space
- / Microprocessor Control
- / Inverter Motor(Low Noise and Maintenance)
- / Automatic Calculation for RPM and RCF
- / Trustworthy Safety Device
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate



Table-Top Centrifuge	VS-5000i	VS-5500i
Max. RPM	5,000RPM (Swing Rotor)	5,500RPM (Swing Rotor)
Max. RCF	4,612×g (Swing Rotor)	5,580×g (Swing Rotor)
Max. Capacity	480ml, 15ml×32Tubes	480ml, 15ml×32Tubes
Standard Rotor	Swing Rotor (VR-50S)	
Main Controller	Microprocessor Control	
Operating Mode	RPM / RCF	
Display	7-Segment FND Display	
Program Memory	20 memory OPTION) 50 memory	
Acceleration	Fast / Slow	
Deceleration	Fast / Normal / Slow	
Timer	99Hr, 59min, & Hold for long run	
Cooling Device	Air Cooling	
Dimension	440×520×330(H)mm	
Drive system	Inverter Motor drive	
Safety Device	Over/Under speed protector, Unbalance detector	
Weight	32Kg	
Power	220V, 500W, 60Hz	

Table-Top Centrifuge

VS-5000i2



VR-50S



VB-04



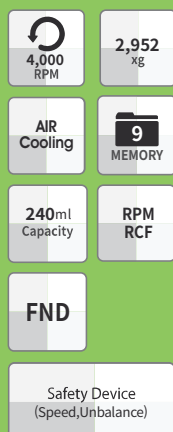
VB-04P



VB-16

Table-Top Centrifuge	VS-5000i2
Max. RPM	4,000RPM(Swing Rotor)
Max. RCF	2,952×g(Swing Rotor)
Max. Capacity	240ml , 15ml×16Tubes(Swing Rotor)
Main Controller	Microprocessor
Display	7-Segment FND Display
Program Memory	9 memory
Timer	99min. & Hold for long run
Cooling Device	Air Cooling
Dimension	440×500×300(H)mm
Drive system	Inverter Motor
Safety Device	Over/Under speed protector Unbalance detector
Weight	30Kg
Power	220V, 250W, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.



Standard Items

Main body
Swing Rotor VR-50S
Bucket VB-04P
Power cable
Manual

※Standard : Steel Door
Option : Colorless Acryl Door

▪ Rotor for VS-5500CFi, VS-5000i, VS-5500i

Swing-out Rotor



VR-50S
Max. 5,500RPM,
Max. 5,580 X g, R165mm

Swing Rotor Speed Table

Rotor	Bucket	VS-5500i		VS-5000i	
VR-50S	VB-04	5,500RPM	5,580xg	5,000RPM	4,612xg
VR-50S	VB-08	5,000RPM	4,612xg	4,500RPM	3,736xg
VR-50S	VB-32, VB-16	4,500RPM	3,736xg	4,000RPM	2,952xg
VR-50S	VC-40 carrier	3,500RPM	2,260xg	3,500PRM	2,260xg
VR-02M	Micro plate	2,500RPM	1,013xg	2,500RPM	1,013xg

Bucket

VB-32



15ml×8tubes,
17×88mm,
4,500RPM, 3,736xg

VB-08



50ml×2tubes,
30×78mm,
5,000RPM, 4,612xg

VB-16



15ml×4tubes,
17×88mm,
4,500RPM, 3,736xg

VB-04



50ml×1tubes,
30×78mm,
5,500RPM, 5,580xg

Rack Carrier



VC-40
Rack Carrier
Max. 3,500RPM, 2,191xg
R160mm

Tube Rack



RK-32
15ml×8tubes
RK-48
10ml×12tubes
RK-56
5ml×14tubes
RK-80
3ml×20tubes

Micro-plate Rotor

Micro-plate Rotor



VR-02M
2,500RPM, 1,153xg,
96well Micro-Plate×2EA

Fixed Angle Rotor

50 ml / 15 ml

For only VS-5500CFi









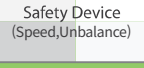



V508A-50
11,000RPM, 13,798xg, R102mm
V5010A-50
6,000RPM, 5,031xg, R125mm
V1512A-50
12,000RPM, 15,294xg, R90.5mm
V1524A-50
6,000RPM, 4,971xg, R123.5mm

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Table-Top Centrifuge

VS-400

 4,000 RPM	 2,790 xg
 FND	 PRP
 RPM RCF	 TABLE TOP
 AIR Cooling	 300ml Capacity
 Safety Device (Speed, Unbalance)	
 9 MEMORY	

Standard items

Main body
Angle Rotor V1512AL
Power cable / Manual

※ Standard : Steel Door
Option : Colorless Acryl Door



Option

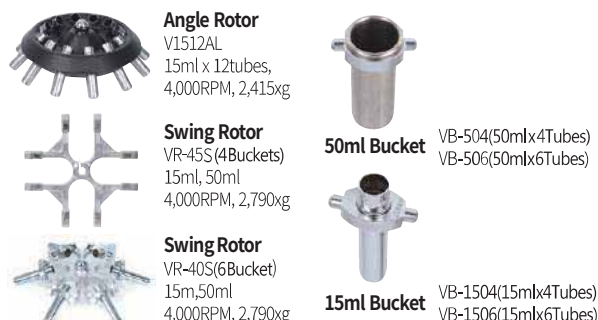


Table-Top Centrifuge	VS-400
Max. RPM	4,000RPM
Max. RCF	2,790 × g (Swing Rotor) / 2,415 × g (Angle Rotor)
Max. Capacity	300ml, 50ml × 6 Tubes
Standard Rotor	Swing Rotor (VR-45S)
Main Controller	Microprocessor
Operating Mode	RPM / RCF
Display	7-Segment FND Display
Program	9 memory
Timer	99min. & Hold for long run
Cooling Device	Air Cooling
Dimension	390 × 470 × 280(H)mm
Drive system	Inverter Motor
Safety Device	Over/Under speed protector, Unbalance detector
Weight	20Kg
Power	220V, 200W, 60Hz

※ There are not included Testtubes. Customer should ask or take suitable tubes separately.

Table-Top Centrifuge

VS-424

 4,000 RPM	 3,005 xg
 FND	 RPM RCF
 AIR Cooling	 TABLE TOP
 360ml Capacity	 9 MEMORY
 Safety Device (Speed, Unbalance)	

Standard items

Main body
Angle Rotor VR-40A
Power cable / Manual

※ Standard : Steel Door
Option : Colorless Acryl Door



Option



Table-Top Centrifuge	VS-424
Max. RPM	4,000RPM
Max. RCF	3,005 × g (Angle Rotor) / 2,951 × g (Swing Rotor)
Max. Capacity	360ml, 15ml × 24 Tubes
Standard Rotor	Angle Rotor (VR-40A)
Main Controller	Microprocessor
Operating mode	RPM / RCF
Display	7-Segment FND Display
Program	9 memory
Timer	99min & Hold for long run
Cooling Device	Air Cooling
Dimension	420 × 475 × 295(H)mm
Drive system	Inverter motor drive
Safety Device	Over/Under speed protector, Unbalance detector
Weight	23Kg
Power	220V, 440W, 60Hz

※ There are not included Testtubes. Customer should ask or take suitable tubes separately.

Table-Top Centrifuge

VS-450V

- / Selectable between Angle rotor and Swing Rotor
- / Compact Design for saving space
- / Inverter Motor (Low Noise and Maintenance)
- / Automatic Calculation for RPM and RCF
- / Vortex Mixer Function are built in unit
- / Trustworthy Safety Device
- / CE, KGMP, ISO9001, ISO14001, ISO13485 Certificate

Table-Top Centrifuge	VS-450V
Max. RPM	4,200 RPM(Swing Rotor), 6,000RPM(Angle Rotor)
Max. RCF	3,056 × g(Swing Rotor) 5,031 × g(Angle Rotor)
Max. Capacity	160ml (15ml×4 tubes, 50ml×2 tubes)
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Program	9 Memory
Timer	99Min. & Hold for long run
Cooling Device	Air Cooling
Chamber Heating	Chamber Heating device 200W (OPTION)
Dimension	390×460×280(H)mm
Device System	Inverter Motor drive
Safety Devices	Over / Under speed protector, Unbalance detector
Weight	20 Kg
Vortex mixer	Max. 2,500 RPM
Mode	Touch On
Drive system	AC Motor Drive
Power	220V, 200W, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

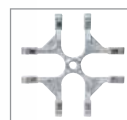


Option



Angle Rotor (V154502A)

15ml x 4 + 50ml x 2
Max. 6,000RPM
Max. 5,031 x g



Swing Rotor (VR-45S)

Max. 4,200RPM
Max. 3,056xg



Bucket (VB-504)

50ml x 4 Tubes



Bucket (VB-1504)

15ml x 4 Tubes



Standard items

Main body
Swing Rotor VR-45S
Bucket VB-1504
Power cable
Manual

※Standard : Steel Door
Option : Colorless Acryl Door

Table-Top Centrifuge

VS-450 / VS-450V

- / Selectable between Angle rotor and Swing Rotor
- / Compact Design for saving space
- / Inverter Motor (Low Noise and Maintenance)
- / Automatic Calculation for RPM and RCF
- / Vortex Mixer Function are built in unit (VS-450V model only)
- / Trustworthy Safety Device
- / CE, KGMP, ISO9001, ISO14001, ISO13485 Certificate

** All function of VS-450V and VS-450 model are same except vortex mixer function. VS-450V have Vortex mixer, VS-450 do not have Vortex mixer function.

Table-Top Centrifuge	VS-450 / VS-450V
Max. RPM	4,200 RPM(Swing Rotor), 6,000RPM(Angle Rotor)
Max. RCF	3,056 × g(Swing Rotor) 5,031 × g(Angle Rotor)
Max. Capacity	160ml (15ml×4 tubes, 50ml×2 tubes)
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Program	9 Memory
Timer	99Min. & Hold for long run
Cooling Device	Air Cooling
Chamber Heating	Chamber Heating device 200W (OPTION)
Dimension	390×460×280(H)mm
Device System	Inverter Motor drive
Safety Devices	Over / Under speed protector, Unbalance detector
Weight	20 Kg
Vortex mixer (For Only VS-450V)	Max. 2,500 RPM
Mode (For Only VS-450V)	Touch On
Drive system(For Only VS-450V)	AC Motor Drive
Power	220V, 200W, 60Hz

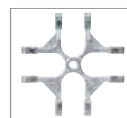
※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Option



Angle Rotor (V154502A)

15ml x 4 + 50ml x 2
Max. 6,000RPM
Max. 5,031 x g



Swing Rotor (VR-45S)

Max. 4,200RPM
Max. 3,056xg



Bucket (VB-504)

50ml x 4 Tubes



Bucket (VB-1504)

15ml x 4 Tubes



[VS-450V]



[VS-450]



4,200 RPM	160ml Capacity
3,056 xg	RPM RCF
FND	AIR Cooling
9 MEMORY	Table Top
Safety Device (unbalance)	

Standard items

Main body
Swing Rotor VR-45S
Bucket VB-1504
Power cable
Manual

※Standard : Steel Door
Option : Cololess Acryl Door

Table-Top Cetrifuge

VS-360

- ✓ MAX 4,000RPM, 1,824 X g
- ✓ Built in A.C. Motor
- ✓ Microprocessor Control
- ✓ Automatic Caluculation for RPM a
- ✓ Control Type by Jog Dial
- ✓ Compact Design for Saving Space
- ✓ Short Spinning function (SPIN/DOV
- ✓ Trustworthy Safety Device



Option



Rotor

V0512A-36 (For 5~10ml vacutainer)

MAX 4,000RPM, 1,788xg, R100mm

V1508A-36 (For Conical/Round tube)

MAX 4,000RPM, 1,824xg, R102mm

V1512A-36 (For Round tube)

MAX 4,000RPM, 1,824xg, R102mm

Table-Top Centrifuge	VS-360
Max. RPM	4,000RPM
Max. RCF	1,824 xg
Max. Capacity	180ml, 15ml x 12tubes
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Timer	99min.
Cooling Device	Air Cooling
Dimension	250 x 340 x 233(H)mm
Drive system	AC Motor Drive
Weight	10kg
Power	220V, 140W, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Mini Centrifuge

VS-100B-M / VS-100B-N

- ✓ Mini Sized compact Centrifuge for saving space
- ✓ Vortex Mixer Function on Centrifuge (VS-100B-M)
- ✓ 8 PCR Tube Strip (Option)
- ✓ Quick Spin Down
- ✓ Standard 8 Hole Rotor
- ✓ Neon Light (Color: Red, Green and Blue Neon)
- ✓ CE, KGMP, ISO9001, ISO14001, ISO13485 Certificate



VS-100B-M

VS-100B-N

Option



VS-100B-M
PCR Rotor



VS-100B-N
PCR Rotor

Mini Centrifuge	VS-100B-M	VS-100B-N
Max. RPM	10,000RPM / 4,000RPM	10,000RPM
Max. RCF	5,590×g / 894×g	5,590×g
Max. capacity	12ml(1.5ml×8Tubes)	
Function	1.Centrifuge : 1.5ml×8Tubes	Centrifuge : 1.5ml×8Tubes OPTION) 0.2ml 8PCR Tube Strip X 2
	2.Centrifuge : 0.2ml 8PCR Tube Strip ×2	
	3,Vortex Mixer	
Safety Device	Safety Door Lock	
Drive system	Direct Drive system	
Dimension	153×162×122(H)mm	
Weight	1Kg	
Power	220V, 20W, 60Hz	

4,000 RPM	180ml Capacity
1,824 xg	RPM RCF
JOG DIAL	AIR Cooling
FND	Quick SPIN/Down
Safety Device (Speed, Unbalance)	

Standard item

Main body
Angle Rotor(V1508A-36)
Power Cable
Manual

10,000 RPM	5,590 xg
Quick Spin/Down	ONE Touch
PCR Rotor	12ml Capacity
Safety Device (Speed, Unbalance)	
AIR Cooling	

Standard item

VS-100B-M

Main Body
1.5ml X 8Tube Rotor
PCR Rotor
Vortex Head
Power Cable
Manual









VS-100B-N

Main Body
1.5ml X 8Tube Rotor
Power Cable
Manual

Hematocrit Centrifuge

VS-12000

- / Easy to check the Hematocrit
- / Compact Design for saving space
- / Brushless D.C.Motor (Low Noise and Maintenance)
- / KGMP, ISO9001, ISO14001, ISO13485 Certificate

 12,000 RPM	 0.96ml Capacity
 13,000 xg	 Hematocrit
 BLDC	 AIR Cooling
 0.04ml capillary Tube	
 Safety Device (Speed, Unbalance)	

Standard items

Main body
Hematocrit Rotor
Reading card
Power cable
Manual

Option)
Capillary tube

Hematocrit Centrifuge	VS-12000
Max. RPM	12,000RPM
Max. RCF	13,000×g
Max. Capacity	0.96ml, 0.04ml × 24 Capillary Tubes
Drive system	MPB Brushless D.C. Motor Drive
Brake system	Dynamic electronic brake system
Timer	15min. & Hold for long run
Dimension	255×290×215(H)mm
Weight	15Kg
Safety Device	Over / Under Speed Protector, Unbalance detector
Power	220V, 220W, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.



Centra-Vac

VS-250

Generally, Biological, Clinical Sample are separated by using Freezer Dryer or Ultrafiltration. But, It needs a lots of sample volume, there are many sample loss by this method.

Centra-Vac (VS-250) can be worked with small sample volume or Toxic Solution without loss.

Centra-Vac can be evaporated Ethanol for short time, DNA pellet can be collected on edge of Tube.

Temperature in chamber can be measured by LED Display

✓ Drying time is short.

Progress time can be save and reduce, Concentrate and drying quickly by High Quality Vacuum pump for 200Liter/min.

✓ Withdrawal 100% Sample

Sample can be call in 100% because Sample Bubbling is prevented by Centrifuge.

✓ Small Sized Sample are possible

Micro tube 1.5ml, 15ml, 50ml are usable.

✓ Prevention of Sample pollution

Sterilized tube are used on Vacuum Condition

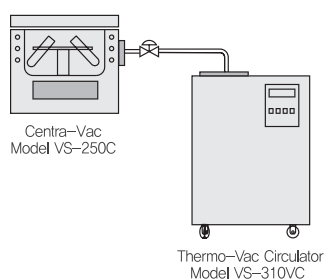
✓ Economic Efficiency

Partial unit purchase is available by Module type of system

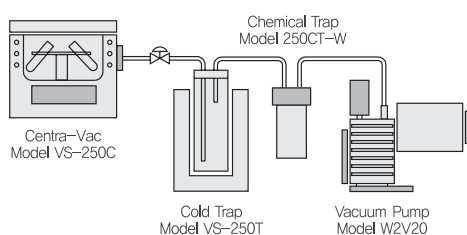
✓ Multi Purpose

Cold Trap, Vacuum Pump, Centrifuge can be connected and used on other equipment for Gel Drying, Filtration, Drying and Etc.

Centra-Vac System	VS-250
VS-250	Centra-Vac (VS-250C), Cold Trap (VS-250T)
	Vacuum pump (W2V20), Stand (250ST0), 250CT-W, 250SH
VS-250VC	VS-250C, VS-310VC



VS-250VC System



VS-250 System



Centra-Vac

VS-250

Standard items

Main body(VS-250C)
Cold Trap(VS-250T)
Vacuum Pump(W2V20)
Chemical Trap(250CT-A)
Stand(250STB)
Tubing Kit(250SH)
Rotor(VR1.560)
Power Cable
Manual

Centra-Vac	VS-250C
Rotor Speed	2,000 RPM
Drive system	Brushless AC Motor
Display	LED Display for Temperature
Heater	Silicone Tube Heater
Rotor Chamber	Stainless Steel, Chemical Resistant
Dimension	250 × 285 × 230(H)mm
Lid	Transparent Acrylic Resin
Power / Weight	220V, 1.8A, 60Hz, 25kg

Cold Trap	VS-250T
Temp.	-60℃
Trap Capacity	1.6 Liter
Trap Material	Stainless Steel, SUS 304
Dimension	360 × 420 × 320(H)mm
Drain Valve	Rotary Closed Valve
Power / Weight	220V, 1.4A, 60Hz, 35kg

Vacuum Pump	W2V20
Type	Two Stage Direct Drive
Ultimate Vacuum	5 × 10 ⁻¹ mmHg
Pumping Speed	200 Liter / min.
Dimension	150 × 436 × 256mm
Power / Weight	220V, 2.5A, 60Hz, 21kg

Thermo-Vac Circulator (Option)	VS-310VC
Temp. Control	Digital PID Controller
Temp. Range	-20℃ to 99℃
Aspiration	40 Liter/min.
Ultimate Vacuum	Max, 7mmHg
Circulation Pump	25 Liter/min.
Dimension (in)	300 × 300 × 300/200(H)mm
(out)	530 × 370 × 825(H)mm
Power / Weight	220V, 5.9A, 1.3kW, 60Hz



Rotor

VR1.560-25	1.5ml × 60Tubes, Total 90ml
VR1524-25	15ml × 24Tubes, Total 360ml
VR508-25	50ml × 8Tubes, Total 400ml

Option

250CT-A

Chemical Trap for Acid Vapor

250CT-W

Chemical Trap for Water Vapor

250CT-O

Chemical Trap for Organic Solvent Vapor

250STO

Stand, 450(W) × 500(D) × 850(H)mm

250SH

Tubing Kit



VS-250T Cold Trap



W2V20 Vacuum Pump



Chemical Trap



250STO Stand



VS-310VC
Thermo-vac Circulator

Multi Station

VS-6030Si(ADIPLUS)

- ✓ Max. 4,000RPM, 3,309 x g
- ✓ Large Capacity (240cc) at Once
- ✓ Multi Purpose for Laboratory, Hospital and University
- ✓ Centrifuge, Shaking Incubator and Shelf are in a unit
- ✓ General test tube and 60cc Syringes are usable
- ✓ Automatic Calculation for RPM and RCF
- ✓ Available setting for Time, Speed and Temperature.

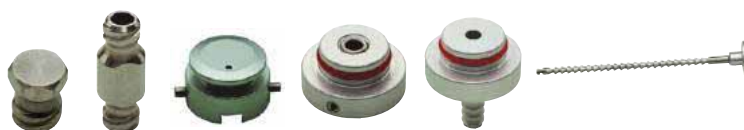


Multi station	VS-6030Si
Max. RPM	4,000RPM
Max. RCF	3,309 x g
Max. Capacity	240ml, 60cc Syringe X 4pcs
Standard Rotor	Swing rotor (VR-6030S)
Main Controller	Microprocessor Control
Display	7-Segment FND Display
Program Memory	9 Memory
Timer	99 min. 59 sec. & Hold for long run
Cooling Device	Air Cooling
Drive System	Inverter Motor drive
Safety Devices	Over/ Under speed protector, Unbalance detector
Power	220V, 440W, 60Hz

Shaking Incubator	
Temp. Range	Ambient + 5°C to 50°C
Temp. Controller	Digital P.I.D. controller
Speed Range	10 - 250 RPM
Timer	99Hr. 59Min. & Hold for long run
Drive system	Beltless D.C. Motor
Circulation Fan	90mm convection fan
Safety Device	Over temperature Protector
Power	220V, 220W, 60Hz
Dimension	650 x 795 x 1,040(H)mm
Weight	92 Kg

※There are not included Testtubes,Kit or Syringe. Customer should ask or take suitable tubes,Kit orSyringe separately.

ADIPLUS Kit



Option



Shaking Incubator
(Reciprocal Type)
For 4x60cc Syringes



Bucket(VB-60)
For 60cc Syringes



Swing Out Rotor(VR-6030S)
Max. 4,000 RPM Max. 3,309xg
For 4x60cc Syringes

60cc
Syringe

Shaker

4,000
RPM

RPM
RCF

3,309
xg

FND

All in
One

AIR
Cooling

9
MEMORY

240cc
Capacity

Safety Device
(Speed,Unbalance,Temp.)

Standard Items

Main body
Swing Rotor (VR-6030S)
Bucket (VB-60)
Shaking Incubator
ADIPLUS Kit
Power Cable
Manual

Multi Station

VS-6030LV

- ✓ Max. 5,500RPM, 5,580xg
- ✓ Multi Purpose clean bench for Institute, Hospital and University
- ✓ Centrifuge, Shaking Incubator and Clean bench in a unit
- ✓ Filtering of Class 100, 0.3 Micro Dirty by HEPA Filter
- ✓ 50ml conical tube is usable
- ✓ Lower Contamination Rate
- ✓ Automatic Calculation for RPM and RCF
- ✓ Time, Speed and Temperature can be set
- ✓ Adjustable Control for UV Lamp, Blower Fan and Filter List Instructor
- ✓ Available shaking for Various kinds of Tube or Kits(Spring Rack)
- ✓ Option: Suction Machine, Vacuum Pump and Foot Switch



Class 100	Shaker
5,500 RPM	RPM RCF
5,580 xg	FND
UV lamp	AIR Cooling
9 MEMORY	480ml Capacity
Safety Device (Speed, Unbalance, Temp.)	

Standard Items

Main body
Swing Rotor (VR-50S)
Bucket (VB-04)
Shaker (Spring Rack)
HEPA FILTER
U.V Lamp
F.L Lamp
Power Cable
Manual

Multi Station	VS-6030LV
Max. RPM	5,500RPM
Max. RCF	5,580 x g
Max. Capacity	480ml, 15ml x 32 Tubes
Main controller	Microprocessor controller
Display	7-Segment FND Display
Operating mode	RPM / RCF
Program	9 memories
Timer	99Hr. 59min. & Hold for long run
Purity	Lower Than Class 100
Air Exhaust	150L / Min
Efficiency	0.3 Micron Particle 99.97% Filtering
Material (in)	Stainless Steel
(out)	Steel with Powder coating
Illumination	20W F.L Lamp x 1EA
UVG Lamp	15W x 1EA
Safety Device	Over Speed Protect, Unbalance Detector, TEMP. Protector
Dimension (in)	705(240) x 570 x 500(H)mm
(out)	710 x 630 x 1,735(H)mm
Power	220V, 770W, 60Hz

※There are not included Testtubes. Customer should ask or take suitable tubes separately.

Option

Centrifuge



VR-50S
Max. 5,500RPM,
Max. 5,580xg



VB-04
50ml x 4tubes,
5,500RPM, 5,580xg



VB-08
50ml x 8tubes,
5,000RPM, 4,611xg



VB-16
15ml x 16tubes,
4,500RPM, 3,735xg



VB-32
15ml x 32tubes,
4,500RPM, 3,735xg

Spring Rack Plate



HEPA Filter



Foot Switch



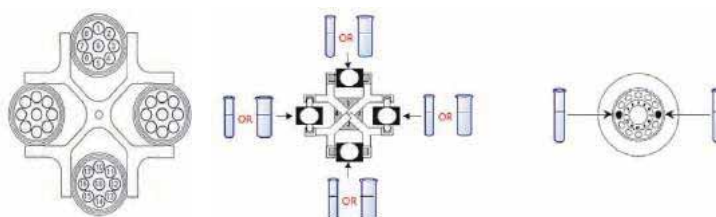
Low- and High-Speed Centrifuge Ware Guide

For Centrifuge less than 24,000RPM

No	Volume	Item No.	Contents	Dia × mm	Material	Max. RCF	
						4°C	22°C
1	10 ml	3114-0010	Oak Ridge Tube, Screw Top	16.0×81.5	FEP	50,000	20,000
		3115-0010		16.0×82.0	PSF	50,000	50,000
		3118-0010		16.1×81.7	PC	50,000	50,000
		3119-0010		16.0×81.4	PPCO	50,000	50,000
2	15 ml	3110-0150	Round Tube, Open Top	15.9×113.9	PPCO	50,000	50,000
		3117-0150		16.1×114.3	PC	50,000	50,000
3	30 ml	3114-0030	Oak Ridge Tube, Screw Top	25.7×93.7	FEP	50,000	20,000
		3115-0030		25.7×94.5	PSF	50,000	50,000
		3118-0030		25.7×94.5	PC	50,000	50,000
		3119-0030		25.5×94.3	PPCO	50,000	50,000
4	50 ml	3114-0050	Oak Ridge Tube, Screw Top	28.8×107.7	FEP	50,000	20,000
		3115-0050		29.0×107.7	PSF	50,000	50,000
		3118-0050		28.8×107.0	PC	50,000	50,000
		3119-0050		28.8×106.7	PPCO	50,000	50,000
5	85 ml (100 ml)	3118-0085	Oak Ridge Tube, Screw Top	38.2×105.7	PC	50,000	50,000
6	250 ml	3120-0250	Bottle, Screw Top	61.8×127.7	PPCO	13,200	13,200
		3122-0250		61.8×127.6	PC	27,500	27,500
7	500 ml	3120-9500	Bottle, Screw Top	69.5×170.2	PPCO	4,800	4,800
		3122-0500		69.5×169.6	PC	13,700	13,700
8	1000 ml	3120-1000	Bottle, Screw Top	97.5×184.5	PPCO	7,100	7,100
		3122-1000		97.6×188.4	PC	7,100	7,100

※ Tube specification can be changed for better quality without any notice by tube manufacturer.

1. Locate centrifuge unit apart 20~30Cm from the wall and both side of the unit for working well without any problem.
2. Set the centrifuge on horizontal place by using level.
3. Before using centrifuge, read the instruction manual enough. If there are some problem, contact to service center immediately.
4. Check Swing out rotor or Angle rotor and buckets are fixed well.
5. Check tube capacity (Available Max. RPM or RCF) can be worked well in advance. If not, Tube can be broken. Some damages can be occurred.
6. Prepare 2 tubes of same volume at least by using pipette or balance. If not, some damages can be occurred by unbalance while unit is working.
7. Fill the material about only 70~80%.
8. Tube should be put symmetrically. If not, some damages can be occurred by unbalance while unit is working.
9. Set the setting value like Temperature, time and speed on permissible range exactly. Check test condition are correct or not.
10. If you are heard about strange sound from the unit or error messages are shown on display, after shutting down the main power, contact to local agency or distributor immediately.
11. Do not touch inside chamber after opening the door by using emergency button while unit is running. Some damages can be occurred.
12. Unit is stopping, wait until it is stopped completely.
After hearing completion alarm or after checking the completion messages, take out the tubes in safety.
13. After using centrifuge, clean inside chamber cleanly. Check all parts are on correct position.
14. After checking all progress, keep the unit on safe place.



How to make the balance



INCUBATOR

02

Vision Scientific
INCUBATOR



CO₂ / O₂ Incubator (Air Jacket)

VS-2050C7/CO7, VS-2180C7/CO7

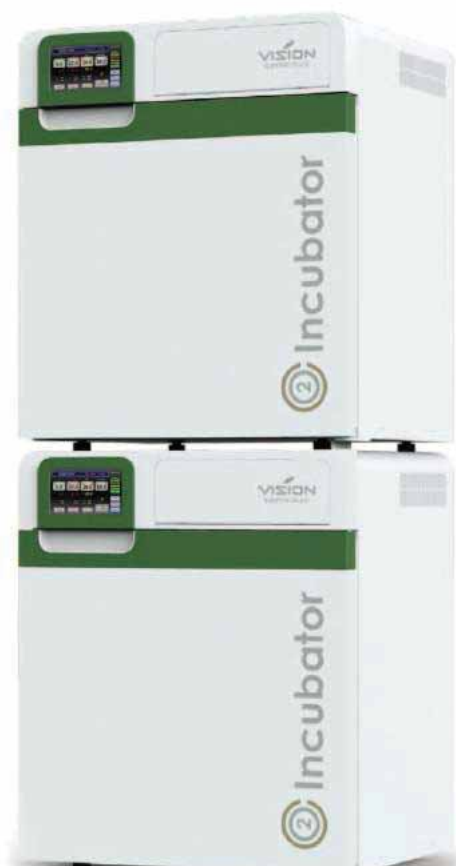
- / Direct Heating System
- / Built in Embedded Compact 7 System
- / 7 Inch All Color Touch Screen
- / Cortex A8 CPU Operation
- / Double Glass Door
- / Rounded Corner Shelves
- / Built in Thermal Recorder
- / Built in Humidity Sensor
- / Self Test System
- / 2 Stage Stackable
- / Data Backup System(USB)
- / Built in Multi task Alarm
- / Available Sterilization(Optional)



VS-2050C7 / CO7



VS-2180C7 / CO7



VS-2180C7 / CO7-2 Stage Stackable

CO₂ / O₂ Incubator (Air Jacket)

VS-2050C7/CO7, VS-2180C7/CO7

- / High precision control by 7 Inch AllColor Touch Screen
- / Rounded Corner Shelves for Pollution Prevention and easy cleaning
- / Precision Dual Wavelength NDIR Co₂ Sensor
- / Self test function
- / Double Glass Door to be reduced GAS consumption
- / Built in Thermal Recorder can be checked all test data immediately(Standard item)
- / Available Data Backup and Upgrade by USB port(Standard item)

CO ₂ / O ₂ Incubator	VS-2050C7 / CO7	VS-2180C7 / CO7
Dimension (in)	355 X 370 X 385 (H)mm	627 X 480 X 600 (H)mm
(out)	440 X 510 X 637 (H)mm	700 X 602 X 840 (H)mm
Capacity	50 Liter	180 Liter
Shelves	2 EA, Adjustable type	3 EA, Adjustable type
Weight	45 kg	85 kg
Power	220V, 440W, 50/60Hz	220V, 660W, 50/60Hz
Display	7 Inch All Color Touch Screen	
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient + 5°C to 50°C	
Temp. Accuracy	± 0.1°C at 37°C	
CO ₂ Range	0 to 20%	
CO ₂ Accuracy	± 0.1% at 5%	
CO ₂ Sensor	NDIR Dual Wavelength Type	
O ₂ Range	0.1 to 99%	
O ₂ Accuracy	±0.1% at 5% (For—CO7 Model)	
O ₂ Sensor	O ₂ Sensor For Medical (For—CO7 Model)	
Material (in)	Stainless steel	
(out)	Steel Plate with Powder Coating	
Heating Type	Direct Heating System (Silicone Heater)	
Door	Double Silicone Magnetic Packing Door	
Inner Door	Safety Glass Door with Silicone Packing	
Safety Device	Over Temperature Protector, Door Open Alarm	
Utility	Thermal Recorder, Sample Port, USB Backup Port	
Humidity	Built in Humidity Sensor	



Option



Internal HEPA Filter



Two stage Regulator



CO₂ / O₂ Analyzer

V2000-ACO ₂	CO ₂ Analyzer
V2000-AO ₂	O ₂ Analyzer
V2000-BCO ₂	CO ₂ Bomb
V2000-BN ₂	N ₂ Bomb
V2000-H	HEPA Filter
V2000-R	Two Stage regulator
V2000-UV	UV Lamp
VModelname-SV	Shelves

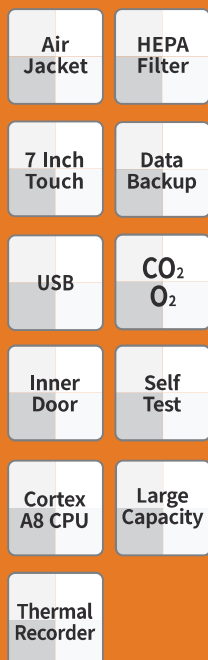
Air Jacket	HEPA Filter
7 Inch Touch	Data Backup
USB	CO ₂ O ₂
Self Test	Large Capacity
Cortex A8 CPU	Thermal Recorder

Standard items

Main Body
Water Tray
Shelves
Thermal Recorder
USB Port
Power Cable
Manual

Large Capacity CO₂ / O₂ Incubator (Air Jacket)

- / High precision control by 7 Inch All Color Touch Screen
- / Rounded Corner Shelves for Pollution Prevention and easy cleaning
- / Precision Dual Wavelength NDIR Co₂ Sensor
- / Self test function
- / Efficiency Double Glass Door to be reduced GAS consumption
- / Built in Thermal Recorder can be checked all test data immediately
- / Available Data Backup and Upgrade by USB Port
- / Large Capacity CO₂/O₂Incubator for 610Liter and 880Liter



Standard items

Main Body
Water Tray
Shelves
Thermal Recorder
USB Port
Power Cable
Manual

CO ₂ / O ₂ Incubator	VS-2610C7 / CO ₂	VS-2880C7 / CO ₂
Dimension (in)	680 X 670 X 1,435 (H)mm	760 X 760 X 1,530 (H)mm
(out)	800 X 795 X 1,790 (H)mm	912 X 940 X 1,830 (H)mm
Capacity	610 Liter	880 Liter
Shelves	6 EA, Adjustable type	6 EA, Adjustable type(Max.24EA)
Weight	250 kg	320 kg
Power	220V, 1.1Kw, 50/60Hz	220V, 1.3Kw, 50/60Hz
Display	7 Inch All Color Touch Screen	
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient + 5°C to 50°C	
Temp. Accuracy	± 0.1°C at 37°C	
CO ₂ Range	0 to 20%	
CO ₂ Accuracy	± 0.1% at 5%	
CO ₂ Sensor	NDIR Dual Wavelength Type	
O ₂ Range	0.1 to 99%	
O ₂ Accuracy	± 0.1% at 5% (For-CO ₂ Model)	
O ₂ Sensor	O ₂ Sensor For Medical (For-CO ₂ Model)	
Material (in)	Stainless steel	
(out)	Steel Plate with Powder Coating	
Heating Type	Direct Heating System (Silicone Heater)	
Door	Double Silicone Magnetic Packing Door	
Inner Door	Safety Glass Door with Silicone Packing	
Safety Device	Over Temperature Protector, Door Open Alarm	
Utility	Thermal Recorder, Sample Port, USB Backup Port	
Humidity	Built in Humidity Sensor	



Option



Internal HEPA Filter



Two stage Regulator



CO₂ / O₂ Analyzer

V2000-ACO ₂	CO ₂ Analyzer
V2000-AO ₂	O ₂ Analyzer
V2000-BCO ₂	CO ₂ Bomb
V2000-BN ₂	N ₂ Bomb
V2000-H	HEPA Filter
V2000-R	Two Stage regulator
V2000-UV	UV Lamp
Vmodelname-SV	Shelves

Shaker & Rocker CO₂/O₂ Incubator (Air Jacket)

VS-2180C7S/R, VS-2610C7S/R, VS-2880C7S/R

VS-2180C07S/R, VS-2610C07S/R, VS-2880C07S/R

Shaker & Rocker CO ₂ / O ₂ Incubator	VS-2180C7S/R, VS-2180C07S/R, VS-2610C7S/R, VS-2610C07S/R, VS-2880C7S/R, VS-2880C07S/R
Display	7 Inch All Color Touch Screen
Shaker	20 – 300 RPM (–C7S Model or –C07S Model)
Rocker	6–64 OPM (–C7R Model or –C07R Model)

Shaker

Model	Max. Shaker	Capacity	Plate Size
VS-2180C7S VS-2180C07S	1	100ml 250ml 500ml Flat-Form Spring Rack	13EA 9EA 5EA 275 x 275 mm
VS-2610C7S VS-2610C07S	3	100ml 250ml 500ml	16EA 9EA 9EA 350 x 320 mm
VS-2880C7S VS-2880C07S		1,000ml Flat-Form Spring Rack	4EA

Rocker

Model	Max. Rocker	Plate Size
VS-2180C7R VS-2180C07R	1	355 x 280 mm
VS-2610C7R VS-2610C07R	3	
VS-2880C7R VS-2880C07R		



Shaker Type

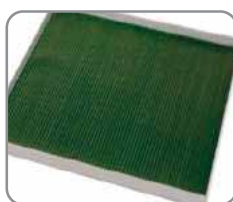


Rocker Type

Option



Plate of Flask



Flat-form Plate



Spring Rack

LCD Display

7 Inch All Color Touch Screen

MAIN VIEW



TREND VIEW



EMBEDDED CONTROL SYSTEM

Embedded Control System for C7 Series

Embedded Compact 7 system included High Quality Cortex A8 CPU Core 1Ghz is a solution can be controlled by built Microprocessor to be offered best working condition. This system can be controlled CO₂, O₂ Temperature and Humidity with high efficiency and precision on a touch screen.



01 Main View

- 7 Inch All Color Touch Screen
- Available checking and setting all protocol on Main View Easy to set and work on Main view



02 Trend View

- Available checking working status by Graph on real time



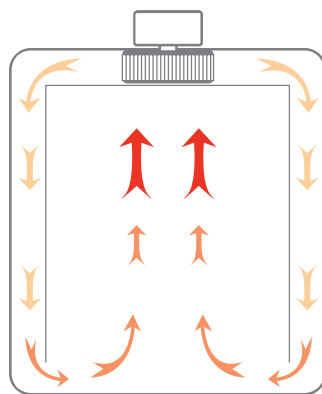
03 History View

- Available setting Recording time, Event and Checking status for TEMP/CO₂/O₂/Date

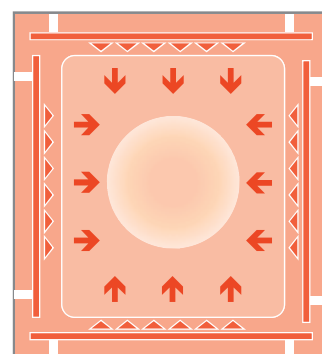


04 Project Data View

- Available edit of data like Backup, Movement, folder Edit of Data



Air Jacket Heating Flow



Water Jacket Heating Flow

CO₂/O₂ Incubator (Air Jacket)

VS-2180C/COVS

- / Direct Heating System
- / Dual Wavelength NDIR CO₂ Sensor
- / Embeded Computer ARM920T-266MHZ CPU
- / 5.6 Inch All Color Touch Screen
- / Window CE5.0 System
- / Double Glass Door
- / Rounded Corner Shelves
- / Built in Thermal Recorder
- / Built in Humidity Sensor
- / Self Test System
- / 2 Stage Stackable
- / Data Backup System(USB)
- / Built in Multi task Alarm



VS-2050C/CO



VS-2180C/CO



VS-2180C/CO-2 Stage Stackable

CO₂ / O₂ Incubator (Air Jacket)

- / Air Jacket Direct Heating Type
- / Built in Embedded Computer ARM920T-266MHz CPU
- / LCD 5.6" Screen All Touch System
- / Excellent Stability and various function by Window CE5.0
- / Built in Thermal Recorder in standard item
- / Humidity View Sensor
- / Easy to manage by Self Test function
- / Easy to save and check the Data (Incubator→USB→Computer)
Data Backup (Convertible to Excel, Word, Memo)
- / Rounded Corner Shelves for pollution prevention
- / Multi task Alarm device



CO ₂ / O ₂ Incubator	VS-2050C/CO	VS-2180C/CO
Dimension (in)	355 X 370 X 385 (H)mm	627 X 480 X 600 (H)mm
(out)	440 X 500 X 620 (H)mm	700 X 600 X 830 (H)mm
Capacity	50 Liter	180 Liter
Shelves	2 EA, Adjustable type	3 EA, Adjustable type
Weight	43 kg	84 kg
Power	220V, 440W, 50/60Hz	220V, 660W, 50/60Hz
Display	5.6 Inch All Color Touch Screen	
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient + 5°C to 50°C	
Temp. Accuracy	± 0.1°C at 37°C	
CO ₂ Range(%)	0 to 20%	
CO ₂ Accuracy	± 0.1% at 5%	
CO ₂ Sensor	NDIR Dual Wavelength Type	
O ₂ Range	0.1 to 99%	
O ₂ Accuracy	±0.1% at 5% (For-CO7 Model)	
O ₂ Sensor	O2 Sensor For Medical (For-CO7 Model)	
Material (in)	Stainless steel	
(out)	Steel Plate with Powder Coating	
Heating Type	Direct Heating System (Silicone Heater)	
Door	Double Silicone Magnetic Packing Door	
Inner Door	Safety Glass Door with Silicone Packing	
Safety Device	Over Temperature Protector, Door Open Alarm	
Utility	Thermal Recorder, Sample Port, USB Backup Port	
Humidity	Built-in Humidity Sensor	

Option



Internal HEPA Filter



Two stage Regulator



CO₂ / O₂ Analyzer

V2000-ACO ₂	CO ₂ Analyzer
V2000-AO ₂	O ₂ Analyzer
V2000-BCO ₂	CO ₂ Bomb
V2000-BN ₂	N ₂ Bomb
V2000-H	HEPA Filter
V2000-R	Two Stage regulator
V2000-UV	UV Lamp
V modelname-SV	Shelves

Air Jacket

HEPA Filter

CO₂ O₂

Data Backup

USB

5.6 INCH TOUCH

Self Test

Thermal Recorder

Embedded System

Standard Items

Main Body
Water Tray
Shelves
Thermal Recorder
USB Port
Power Cable
Manual

CO₂ / CO₂ O₂ Incubator(Air Jacket / Dry Heat Sterilization)

VS-2180CDS / VS-2180CODS

- / Direct Heating System
- / Dual Wavelength NDIR CO₂ Sensor
- / Embeded Computer
- / 5.6 Inch All Color Touch Screen
- / Window CE5.0 System
- / Double Glass Door
- / Rounded Corner Shelves
- / Built in Thermal Recorder
- / Built in Humidity Sensor
- / Self Test System
- / Dry Heat Sterilization
- / Data Backup System(USB)
- / Built in Multi task Alarm



VS-2180CDS



Opening the Door

CO₂ / CO₂ O₂ Incubator(Air Jacket / Dry Heat Sterilization)

VS-2180CDS / VS-2180CODS

- / Air Jacket Direct Heating Type
- / Embedded Computer ARM920T-266MHz CPU
- / All Color LCD Touch Screen System
- / Multi Function by Window CE5.0
- / Thermal Recorder in standard item
- / Humidity View Sensor
- / Self-test program
- / Easy to make data and backup
(Incubator → USB → Computer)
- / Data Backup (Convertible to Excel, Word, Memo file)
- / Rounded Corner design and Shelves
- Multi Function Alarm



Air Jacket	HEPA Filter
CO ₂ O ₂	Data Backup
USB	5.6 INCH TOUCH
Self Test	Thermal Recorder
Embedded System	Dry Heat Sterilizer

	CO ₂ Incubator(VS-2180CDS)	CO ₂ / O ₂ Incubator(VS-2180CODS)
Dimension (in)	600x500x680 (H)mm	600x500x680 (H)mm
(out)	945 x 600 x 800(H)mm(Rubber Feet:825mm)	945 x 600 x 800(H)mm(Rubber Feet:825mm)
Capacity	180 Liter	180 Liter
Shelves	3EA (Stainless Steel Adjustable Type)	3EA (Stainless Steel Adjustable Type)
Weight	130Kg	130Kg
Power	220V 50/60Hz 10A	220V 50/60Hz 10A
Display	5.6 Inch All Color Touch Screen	5.6 Inch All Color Touch Screen
Temp. Controller	Digital PID Controller	Digital PID Controller
Temp. Range	Ambient + 5°C to 50°C (± 0.1 °C at 37°C)	Ambient + 5 °C to 50 °C (± 0.1 °C at 37 °C)
CO ₂ Range(%)	0 to 20% (± 0.1% at 5%) (CO ₂)	0 to 20% (± 0.1% at 5%)
CO ₂ Sensor	NDIR Dual Wavelength Type	NDIR Dual Wavelength Type
O ₂ Range(%)	N / A	0.1 to 99%, ± 0.1% at 5%
O ₂ Sensor		Medical M-04 (-CO Model)
Dry heat sterilization	Ambient +5°C to 121°C at 6Hours	Ambient +5°C to 121°C at 6Hours
Data Back up(USB)	Convertible to Excel, Word and Memo file	Convertible to Excel, Word and Memo file
Material (in)	Stainless steel	Stainless steel
(out)	Steel Plate with Powder Coating	Steel Plate with Powder Coating
Heating Type	Direct Heating System (Silicone Heater)	Direct Heating System (Silicone Heater)
Door	Double Silicone Magnetic Packing Door	Double Silicone Magnetic Packing Door
Inner Door	Safety Glass Door with Silicone Packing	Safety Glass Door with Silicone Packing
Safety Device	Over Temperature Protector, Door Open Alarm	Over Temperature Protector, Door Open Alarm
Utility	Thermal Recorder, Sample Port, USB Backup Port	Thermal Recorder, Sample Port, USB Backup Port
Humidity	Built-in Humidity Sensor	Built-in Humidity Sensor

Standard item

Main Body
Water Tray
Shelves
Thermal Recorder
USB Port
Power Cable
Manual

Option



Internal HEPA Filter

Two stage Regulator

CO₂ / O₂ Analyzer

V2000-ACO ₂	CO ₂ Analyzer
V2000-AO ₂	O ₂ Analyzer
V2000-BCO ₂	CO ₂ Bomb
V2000-BN ₂	N ₂ Bomb
V2000-H	HEPA Filter
V2000-R	Two Stage regulator
V2000-UV	UV Lamp
V model name -SV	Shelves

WINDOW CE 5.0 SYSTEM

Embeded Control System for C Series

WINDOW CE 5.0 system included High Quality ARM 920T CPU is a solution can be controlled by built Microprocessor to be offered best working condition. This system can be controlled CO₂, O₂, Temperature and Humidity with high efficiency and precision on a touch screen.



01 Main View

- 5,6 Inch All Color Touch Screen
- Available checking and setting all protocol on Main View Easy to set and work on Main view



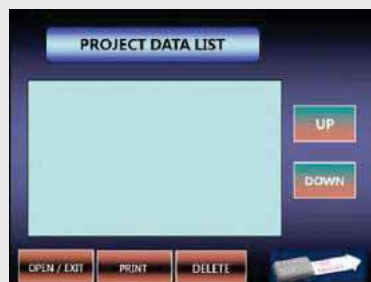
03 History View

- Available setting Recording time, Event and Checking status for TEMP/CO₂ /O₂ /Date



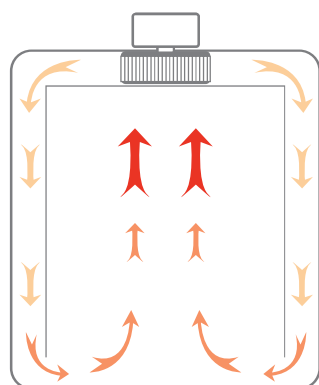
02 Trend View

- Available checking working status by Graph on real time

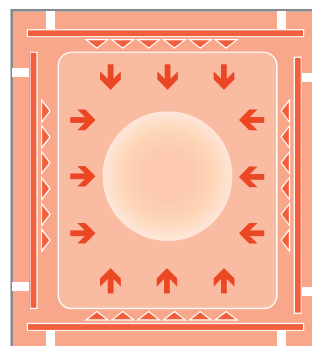


04 Project Data View

- Available edit of data like Backup, Movement, folder Edit of Data



Air Jacket Heating Flow



Water Jacket Heating Flow

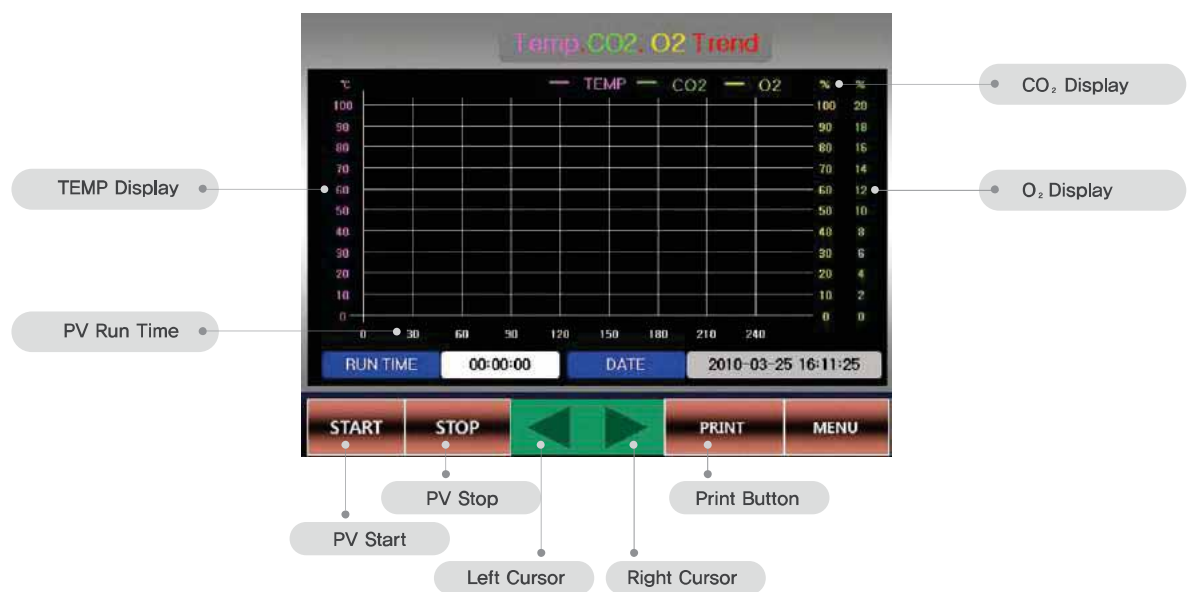
CO₂ Display

5.6 Inch All Color Touch Screen

MAIN VIEW



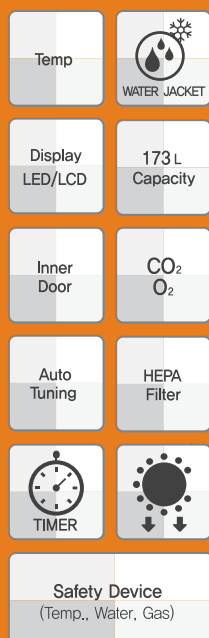
TREND VIEW



CO₂ / O₂ Incubator (Water Jacket)

VS-9170CT VS-9170GCT

- / Water Jacket Type of Co₂/O₂Incubator
- / All Color 7Inch Touch Screen Controller
- / Dual Beam Infra-Red Sendor
- / Rounded Corner Shelves for Pollution Prevention
- / Standard Size can be used on various use purpose
- / Efficiency Double Stackable for saving space
- / Trustworthy Safety device for GAS monitor, Over Heating and Water Level
- / Internal HEPA Filter Unit(Option)
- / Gas Seal Screen to be reduced GAS Consumption(Option)
- / Automatic Sterilization Function - UVGL(Option)



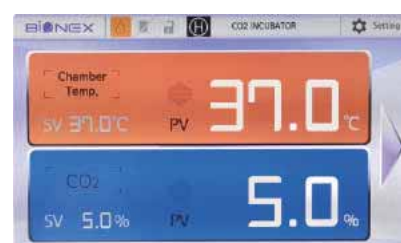
Standard Items

Main Body
Shelves
Water Tray
Power Cable
Manual

CO ₂ Incubator	VS-9170CT
Temp. Controller	Digital PID Controller
Temp. Range	Ambient +5°C to 50°C, ±0.1°C at 37°C
CO ₂ Range	0 to 20%, ±0.1% at 5%
CO ₂ Sensor	Dual-Beam Non Dispersive Infra-red Sensor
Humidification	Up to 96% RH at 37°C
Display	7" Color LCD Touch Screen
Dimension (in)	510 × 480 × 705(H)mm
(out)	605 × 610 × 990(H)mm
Capacity	173 Liter
Water Jacket Volume	34 ℓ
Material (in)	Copper Blended stainless Steel (SUS304)
(out)	Steel Plate with Powder Coating
Door	Double, Silicone Magnetic Packing Door
Inner Door	Safety Glass Door with U-groove Packing
Door Heater	Silicone Heater, Independent Control
Shelves	3EA, Copper-Blended Stainless Steel
Safety Device	Over Temp, Protector, Gas Monitor Alarm, Water Level Monitor, Power Breaker
Utility	Sample Port, Access Hole, Drain Port
Weight	98kg
Power	220V, 5A, 50/60Hz

CO ₂ / O ₂ Incubator	VS-9170GCT
O ₂ Range	0.1 to 20.9%, ±0.1% at 5%
O ₂ Sensor	Industrial Oxygen Sensor

Cooling System	VS-9170CT-R
Dimension (out)	605 × 610 × 1,240(H)mm
Temp. Range	20 to 50°C, ±0.1°C



▲ 7" Touch Screen

Option



Internal HEPA Filter



Two stage Regulator



CO₂ / O₂ Analyzer

CO₂ / O₂ Incubator (Water Jacket)

VS-9000C / VS-9000GC

- / Water Jacket Type of CO₂/O₂ Incubator
- / Easy to move and Compact Design for Saving Space
- / Rounded Corner Shelves for Pollution Prevention
- / High Precision Dual Beam Infra-red Sensor
- / Available using the unit in Chamber of Clean bench for Pollution Prevention
- / Trustworthy Safety Device for GAS Monitor, Over Heating and Water Level
- / Economic model can be reduced GAS consumption and Saving Space

CO ₂ Incubator	VS-9000C
Temp. Controller	Digital PID Controller
Temp. Range	Ambient +5°C to 50°C, ±0.1°C at 37°C
CO ₂ Range	0 to 20%, ±0.1% at 5%
CO ₂ Sensor	Dual-Beam Non Dispersive Infra-red Sensor
Humidification	Up to 96% RH at 37°C
Display	Segment Display & LED
Dimension (in)	320 × 300 × 340(H)mm
(out)	410 × 410 × 540(H)mm
Capacity	33 Liter
Water Jacket Volume	11 ℓ
Material (in)	Copper-Blended Stainless Steel (SUS304)
(out)	Steel Plate with Powder Coating
Door	Double, Silicone Magnetic Packing Door
Inner Door	Safety Glass Door with U-groove Packing
Door Heater	Silicone Heater, Independent Control
Shelves	3EA, Copper-Blended Stainless Steel, Adjustable Type
Safety Device	Over Temp. Protector, Gas Monitor Alarm, Water Level Monitor, Power Breaker
Utility	Sample Port, Access Hole, Drain Port
Weight	40kg
Power	220V, 1.2A, 50/60Hz

CO ₂ / O ₂ Incubator	VS-9000GC
O ₂ Range	0.1 to 20.9%, ±0.1% at 5%
O ₂ Sensor	Industrial Oxygen Sensor



Option



Internal HEPA Filter



Two stage Regulator



CO₂ / O₂ Analyzer

TEMP

WATER JACKET

LED DISPLAY

33L Capacity

INNER DOOR

CO₂ O₂

AUTO TUNING

HEPA Filter

TIMER

UV

Safety Device (Temp., Water, GAS)

Standard Items

Main Body
Shelves
Water Tray
Power Cable
Manual

• Optional Accessories

Model	Optional Accessories
V2500RCO	Two Stage Regulator
V2500BCO	CO ₂ Bomb
V2500BN	N ₂ Bomb
V2500ACO	CO ₂ Analyzer
V2500AO	O ₂ Analyzer
V2500HCO	Internal HEPA Filter
VCO2UV-C	Inner UVGL for Sterilization
VCO2MT-PC	Gas & Temp. Monitoring System
	PC Based Data Logger



Two Stage Regulator



CO₂ / O₂ Analyzer



Segregated Door



Internal HEPA Filter



Cooling System



LED Lamp



Incubator

VS-3050i / VS-3155i / VS-3250i

- / Having the best condition on test for over room temperature
- / Digital PID Controller
- / Easy to set by Touch Key
- / Auto tuning function for high temperature precision
- / Safety device for over temperature heating
- / Forced Circulation type for temperature distribution with high precision
- / Inner Glass door to be reduced the temperature change
- / 50 Liter, 155 Liter and 250 Liter Capacity
- / 10 Step Temperature Program Control (Option, 'P' Model)

Incubator	VS-3050i	VS-3155i	VS-3250i
Dimension (in)	360 × 310 × 450(H)mm	480 × 460 × 700(H)mm	500 × 500 × 1,000(H)mm
(out)	520 × 560 × 710(H)mm	640 × 600 × 955(H)mm	650 × 680 × 1,340(H)mm+ ¹⁾ 100mm
Capacity	50 Liter	155 Liter	250 Liter
Weight	35kg	65kg	94kg
Temp. Controller	Digital PID Controller		
Temp. Range	Ambient +5℃ to 70℃		
Temp. Accuracy	±0.2℃ at 37℃		
Display	LED Display		
Material (in)	Stainless Steel		
(out)	Steel Plate with Powder Coating		
Door	Double Door, Silicone Packing Magnet Door		
Inner Door	Tempered Safety Glass Door		
Circulation Fan	Internal Convection Fan		
Shelves	2EA, Adjustable Type	3EA, Adjustable Type	
Safety Device	Exclusive over Temp. Protector		
Power	220V, 150W, 60Hz	220V, 310W, 60Hz	220V, 400W, 60Hz

¹⁾ VS-3250i : Depends on user inquiry, we can attach the wheel or normal supporter. (Standard : Wheel)

This specification is made basis of 25°C on room temperature

Program Model	Model name + 'P'
Temp. Controller	10 Step Programmable Controller



VS-3155i

Option



Programmable Control
10 Step Program
40 Character Backlit LCD



Chart Recorder
6 Point
120mm Chart



Light Bank_ Shelf Mount
LED Bar



Small BOD Incubator

VS-3050Bi / VS-3125Bi / VS-3150Bi

- / Mini sized Low Temperature BOD Incubator
- / Digital PID Controller
- / Easy to set the Temperature Setting by Key pad
- / Auto Tuning Function for High Precision
- / Trustworthy Safety Device for Over Heating and Cooling
- / Forced Circulation Type for Precision Temperature Distribution
- / Easy to clean inside rounded chamber
- / Inner Glass Door to be reduced the temperature change
- / Available 10 Step Program (Option, 'P' Model)
- / Stainless Wire Shelves(Option)



Standard items

Main Body
Shelves
Power Cable
Manual

Small BOD Incubator	VS-3050Bi	VS-3125Bi	VS-3150Bi
Dimension (in)	360 × 310 × 450(H)mm	500 × 500 × 500(H)mm	500 × 500 × 600(H)mm
(out)	510 × 560 × 1,100(H)mm	650 × 750 × 1,240(H)mm	650 × 750 × 1,340(H)mm
Capacity	50 Liter	125 Liter	150 Liter
Temp. Controller	Digital PID Controller		
Temp. Range	-5℃ to 70℃(Running Temp, 15℃ to 70℃)		
Temp. Accuracy	±0.2℃ at 25℃		
Display	LED Display		
Material (in)	Stainless Steel		
(out)	Steel Plate with Powder Coating		
Door	Double Door, Silicone Packing Magnet Door		
Inner Door	Tempered Safety Glass Door		
Circulation Fan	Internal Convection Fan		
Shelves	2EA, Adjustable Type		
Safety Device	Exclusive over/under Temp. Protector		
Power	220V, 1Kw, 60Hz	220V, 1.1Kw, 60Hz	

Program Model	Model name + 'P'
Temp. Controller	10 Step Programmable Controller

Light Bank	VS-3050Bi-L	VS-3125Bi-L	VS-3150Bi-L
Light	LED Bar X 4EA		
Photoperiod	24Hr, Day & Night Program		

※ -P Model : Standard items + 10 Step Program (Option, 'P' Model)



Option



Programmable Control
10 Step Program
40 Character Back-lit LCD



Chart Recorder
6 Point
120mm Chart



Light Bank_ Shelf Mount
LED Bar

Low Temperature Incubator(BOD Incubator)

VS-3250Bi / VS-3432Bi

- ✓ The best condition of BOD Incubation
- ✓ Suitable test on 15°C ~ 50°C for Long term
- ✓ Digital PID Controller
- ✓ Easy to set temperature by Key pad
- ✓ Auto Tuning Function for High Precision
- ✓ Trustworthy Safety Device for Over Heating/Cooling
- ✓ Stainless Wire Shelves(Optional)
- ✓ Forced Circulation Type for High Temp. Distribution
- ✓ Easy to Clean for inside rounded chamber
- ✓ Inner Glass Door to be reduced Temperature Change
- ✓ 10 Step Temp. Program Control (Option, '-P' Model)
- ✓ Available Light Bank ('-L' Model)
- ✓ Touch Screen Display('-T' Model)

BOD Incubator	VS-3250Bi
Temp. Range	-5°C to 70°C (Running Temp. 15°C to 70°C)
Temp. Accuracy	±0.2°C at 25°C
Temp. Controller	Digital PID Controller
Display	LED Display
Dimension (in)	500 × 500 × 1,000(H)mm
(out)	650 × 750 × 1,640(H)mm
Capacity	250 Liter
Material (in)	Stainless Steel
(out)	Steel Plate with Powder Coating
Door	Double Door, Silicone Packing Magnet Door
Inner Door	Tempered Safety Glass Door
Circulation Fan	Internal Convection Fan
Shelves	3EA, Adjustable Type
Safety Device	Exclusive over/under Temp. Protector
Net Weight	122kg
Power	220V, 1.2KW, 60Hz

Large Capacity	VS-3432Bi
Temp. Range	-5°C to 70°C (Running Temp. 15°C to 70°C)
Dimension (in)	600 × 600 × 1,200(H)mm
(out)	750 × 850 × 1,780(H)mm
Capacity	432 Liter
Power	220V, 1.5KW, 60Hz

Light Bank	VS-3250Bi-L	VS-3432Bi-L
Light	LED Bar X 6EA	
Photoperiod	24Hr. Day & Night Program	

Program Model	Model name + '-P'
Temp. Controller	10 Step Programmable Controller

※ -P Model : Standard items + 10 Step Program (Option, '-P' Model)



Option



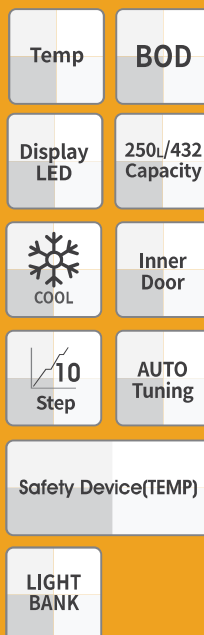
Programmable Control
10 Step Program
40 Character Back-lit LCD



Chart Recorder
6 Point
120mm Chart



Light Bank_ Shelf Mount
LED Bar



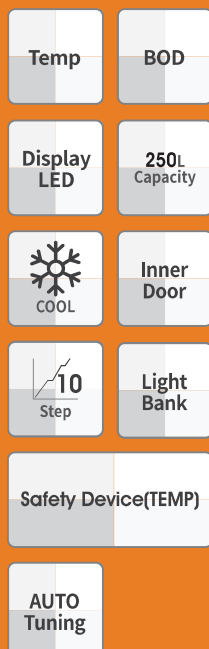
Standard Items

Main Body
Shelves
Power Cable
Manual

Low Temperature Incubator

VS-3250Bi-C / VS-3250Bi-DM

- / Freezing Prevention construction by Heat Exchange for Long term use
- / Suitable the test for 0°C ~ 10°C for Long term(VS-3250Bi-DM : 15°C ~ 50°C)
- / Digital PID Controller
- / Auto Tuning function for high Precision
- / Forced Circulation Type for Precision Temperature Distribution
- / Easy to use
- / Inner Glass Door to be reduced temperature change
- / 10 Step Temperature Program Control (Option, '-P' Model)
- / Double Jacket Type, Pollution Prevention, Low Noise, Prevention of Medium Dry (VS-3250Bi-DM)
- / Easy to set the temperature by Key pad
- / Trustworthy safety device for over heating and cooling
- / Easy to clean inside rounded chamber



Low Temp. Incubator	VS-3250Bi-C
Temp. Controller	Digital PID Controller
Temp. Range	-5°C to 70°C (Running Temp 0°C to 10°C)
Temp. Accuracy	±0.2°C at 25°C
Display	LED Display
Dimension (in)	500 × 500 × 1,000(H)mm
(out)	650 × 750 × 1,740(H)mm
Capacity	250 Liter
Material (in)	Stainless Steel
(out)	Steel Plate with Powder Coating
Door	Double Door, Silicone Packing Magnet Door
Inner Door	Tempered Safety Glass Door
Circulation Fan	Internal Convection Fan
Shelves	3EA, Adjustable Type
Safety Device	Exclusive over/under Temp. Protector
Weight	122kg
Power	220V, 1.1KW, 60Hz

Light Bank	VS-3250Bi-C-L
Light	LED Bar X 6EA
Photoperiod	24Hr, Day & Night Program

No-Dry Type	VS-3250Bi-DM (For Prevention of Medium)
Temp. Range	-5°C to 70°C (Running Temp. 15°C to 60°C)
Dimension (in)	500 × 500 × 1,000(H)mm
(out)	840 × 640 × 1,840(H)mm
Capacity	250 Liter
Power	220V, 1.2kW, 60Hz

Program Model	Model name + '-P'
Temp. Controller	10 Step Programmable Controller

※ -P Model : Standard items + 10 Step Program (Option, '-P' Model)



Option



Programmable Control
10 Step Program
40 Character Back-lit LCD



Chart Recorder
6 Point
120mm Chart



Light Bank_ Shelf Mount
LED Bar

Twin-Room Incubator

VS-3125Di / VS-3250Di

- / 2 Chambers can be controlled separately
- / Digital PID Controller
- / Easy to set Temperature by Key pad
- / Auto Tuning function for High Temperature Precision
- / Trustworthy safety device for over heating and cooling
- / Forced Circulation type for precision temperature distribution
- / Easy to clean inside rounded chamber
- / Inner Glass Door to be reduced temperature change
- / 500Liter and 250Liter Capacity model
- / Available Light Bank ('-L' Model)
- / 10 Step Temperature Program Control (Option, '-P' Model)

Twin-Room Incubator	VS-3125Di	VS-3250Di
Dimension (in)	500×500×500(H)mm×2 Chamber	500×500×1,000(H)mm×2 Chamber
(out)	870×810×1,760(H)mm	1320×750×1,660(H)mm
Capacity	125 Liter × 2, Total 250 Liter	250 Liter × 2, Total 500 Liter
Temp. Controller	Digital PID Controller	
Temp. Range	-5℃ to 70℃ (Running Temp. 15℃ to 70℃)	
Temp. Accuracy	±0.2℃ at 25℃	
Display	LED Display	
Material (in)	Stainless Steel	
(out)	Steel Plate with Powder Coating	
Door	Double Door, Silicone Packing Magnet Door	
Inner Door	Tempered Safety Glass Door	
Circulation Fan	Internal Convection Fan	
Shelves	3EA / Chamber, Adjustable Type	
Safety Device	Exclusive over/under Temp. Protector	
Power	220V, 2.2KW, 60Hz	

Light Bank	VS-3125Di-L	VS-3250Di-L
Light	LED Bar × 6EA × 2 Chamber	LED Bar × 6EA × 2 chamber
Photoperiod	24 Hr. Day & Night Program	

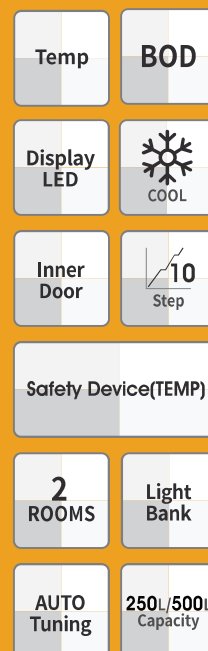
Program Model	Model name + '-P'
Temp. Controller	10 Step Programmable Controller



VS-3125Di



VS-3250Di



Standard Items

Main Body
Shelves
Power Cable
Manual

Multi-Room Incubator

VS-3125QiC / VS-3125Qi

- / Each 4 chambers can be controlled temperature separately
- / Digital PID Controller
- / Easy to set temperature by Key pad
- / Auto Tuning Function for High Temperature Precision
- / Trustworthy safety device for over heating and cooling
- / Forced Circulation Type for Precision Temperature Distribution
- / Easy to Clean inside rounded Chamber
- / Inner Glass Door to be reduced temperature change
- / Available Light Bank (Option, 'L' Model)
- / 10 Step Temperature Program Control (Option, 'P' Model)

Temp	BOD
Display LED	500L Capacity
COOL	Inner Door
10 Step	AUTO Tuning
Light Bank	4 ROOMS
Safety Device(TEMP)	

Standard Items

Main Body
Shelves
Power Cable
Manual

Multi-Room Incubator	VS-3125QiC
Temp. Control	Digital PID Controller
Temp. Range	-5°C to 70°C (Running Temp, 15°C to 70°C)
Temp. Accuracy	±0.2°C at 25°C
Display	LED Display
Dimension (in)	500 × 500 × 500(H)mm × 4 Chamber
(out)	1,745 × 810 × 1,780(H)mm
Capacity	125 Liter × 4, Total 500 Liter
Material (in)	Stainless Steel
(out)	Steel Plate with Powder Coating
Door	Double Door, Silicone Packing Magnet Door
Inner Door	Tempered Safety Glass Door
Circulation Fan	Internal Convection Fan
Shelves	3EA / Chamber, Adjustable Type
Safety Device	Exclusive over & Low Temp. Protector
Power	220V, 4.4KW, 60Hz

Light Bank	VS-3125QiC-L
Light (Each Chamber)	LED Bar X 6EA X 4Chamber
Photoperiod	24 Hr, Day & Night Program

Multi-Room Incubator	VS-3125Qi
Temp. Range	Ambient +5°C to 70°C (at 25°C)
Dimension (in)	500 × 500 × 500(H)mm × 4 Chamber
(out)	1,745 × 810 × 1,760(H)mm
Capacity	125 Liter × 4, Total 500 Liter
Power	220V, 1.2KW, 60Hz

Program Model	Model name + 'P'
Temp. Controller	10 Step Programmable Controller

※ -P Model : Standard items + 10 Step Program (Option 'P' Model)



Multi-Thermo Incubator

- / 5 Chambers can be controlled separately
- / Suitable for TEMP. Comparison and Temp. Gradient test
- / Light Bank in standard item
- / 4 Steps of Lux control
- / Built in Day and Night Program for 24Hr
- / Digital PID Controller
- / Inner Glass Door to be reduced TEMP. Change
- / Auto Tuning for TEMP. Precision
- / Forced Circulation Type for high precision distribution
- / Trustworthy Safety Device for over Heating prevention
- / Easy to Use

Multi-Thermo Incubator	VS-3230Mi
Temp. Controller	Digital PID Controller
Temp. Range	5°C to 55°C
Temp. Accuracy	±0.7°C at 25°C
Dimension (in)	500 × 400 × 1,150(H)mm
(out)	660 × 700 × 1,970(H)mm
Room	5 Room
Room Size	500 × 400 × 230(H)mm × 5 Room
Capacity	230 Liter
Heater	1.5KW
Illumination	F.L. 40W × 8EA, 4 Stage Adjustable
Photoperiod	Day & Night, 24 Hour Timer
Material (in)	Stainless Steel
(out)	Steel Plate with Powder Coating
Door	Double Door, Silicone Packing Magnet Door
Inner Door	Tempered Safety Glass Door, 5 Door
Safety Device	Exclusive over Temp. Protector
Power	220V, 2.1KW, 60Hz

* Unit Shape, Specification and Controller can be changed a little without any notice for better quality

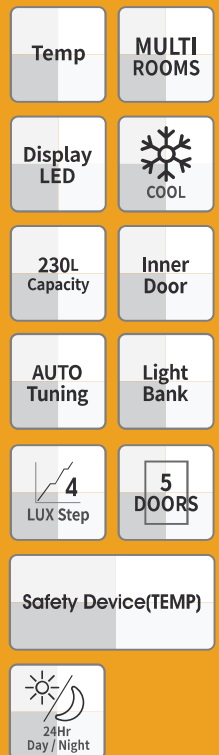


Setting condition for TEMP.Gradient

1. TEMP. should be set from lower TEMP on bottom to higher TEMP. on the top.
2. TEMP difference on each room should be within 2~6°C Range.
ex) Bottom(1st Room): 10°C, 2nd Room: 15°C, 3rd Room: 20°C, 4th Room: 25°C, Top(5th Room): 30°C

Approaching time to stable TEMP.

It takes a lot of time to be Test for TEMP.Gradient because there are Glass plate between each room.
The less TEMP difference between each room, the more time are taken



Standard Item

Main Body
Shelves
Power Cable
Manual

Mini Shaking Incubator

VS-101Si / VS-101SiDR

- Small and Compact size
- Brushless DC Motor with Low Noisy
- Beltless Drum type for long life
- Stable working on 20RPM
- Digital PID Controller
- Built in Comfortable Timer
- Easy to use
- Various Kinds of Rack and plate
- Orbital and Reciprocal Working mode

Mini Shaking Incubator	VS-101Si(Orbital) / VS-101SiDR(Reciprocal)
Temp. Range	Ambient +5℃ to 50℃
Temp. Controller	Digital PID Controller
Speed Range	20 – 300RPM / 20 – 250RPM (–DR Model)
Display	FND Display
Timer	99Hr, 59Min, & Hold for long run
Drive system	Beltless direct drive
Motor	Brushless D.C Motor
Circulation Fan	90mm convection fan
Dimension (in)	310 X 320 X 210(H)mm
(out)	320 X 470 X 320(H)mm
Lid	Acrylic dark gray
Safety Device	Over temperature Protector
Weight	16kg
Power	100–240V, 200W, 60Hz
Standard plate	Flat form Plate



Standard Items

Main Body
Flat form Plate
Manual

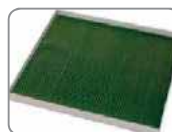
Plate

100ml Flask ... 13EA
250ml Flask ... 9EA
500ml Flask ... 5EA
Flat-form Plate...
275 x 275mm
Spring Rack ...
275 x 275mm

Option



Plate of Flask
PL-101Fi



Flat-form Plate
PL-101Mi



Spring Rack
PL-101Si



Micro Plate well
PL-101Wi

Shaking Incubator

VS-37SI / VS-37SIF, VS-37SI-P / VS-37SIF-P

- / Brushless DC Motor / AC Motor with low noise
- / Stable working on 10RPM
- / Trustworthy Safety Device
- / Various volume of Flask and Tube are available.
- / Available Light Bank ('-L' Model)
- / 4 Step Programs for Speed(RPM) ('-P' Model)
- / 10 Step Program for Temperature('-P' Model)
- / Repeat and reservation Driving Program('-P' Model)



Standard Items

Main Body
Flat Form Plate
Power Cable
Manual

Plate

100ml Flask ... 36EA
250ml Flask ... 25EA
500ml Flask ... 16EA
1000ml Flask ... 9EA
2000ml Flask ... 4EA
Flat-form Plate ...
450x450mm
Spring Rack ...
450x450mm

Shaking Incubator	VS-37SIF	VS-37SI	VS-37SIF-P	VS-37SI-P
Temp. Range	-5℃ to 60℃	Ambient -5℃ to 60℃ (at 25℃)	15℃ to 60℃	Ambient +5℃ to 60℃ (at 25℃)
Weight	81kg	66kg	81kg	66kg
Power	220V, 990W, 60Hz	220V, 400W, 60Hz	220V, 990W, 60Hz	220V, 400W, 60Hz
Display	LED Display		Back-lit LED	
Programmability	—		4 Speed Step / 10 Temp. Program	
Temp. Controller	Digital PID Controller			
Speed Range	20 ~ 350 RPM			
Motor	Brushless D.C. Motor			
Circulation Fan	5" Convection Fan X 2EA			
Dimension (in)	510× 530 × 330(H)mm (Working Plate) , 89Liter			
(out)	515 × 730 × 760(H)mm			
Lid	Acrylic Blue			
Safety Device	Over Temp. Protector, Door Detector			
Standard plate	Flat-form Plate			

※ Specification was made basis of Room Temperature 25°C.(VS-37SI / VS-37SI-P)

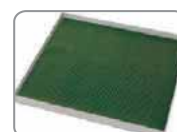
Light Bank	VS-37SIF-L	VS-37SIF-P-L
Light Bank	LED Bar X 2EA	
Photoperiod	24Hr. Photoperiod Program	



Option



Plate of Flask
PL-37PF



Flat-form Plate
PL-37FF



Spring Rack
PL-37SR



Micro Plate Well
(Order Made)

Shaking Incubator

VS-38SIF / VS-38SIF-P

- Stable Working on 10RPM
- Trustworthy Safety Device
- Available Various volume of Flask and Tube
- Available Light Bank (‘-L’ Model)
- 4Step Programs for Speed(RPM)(‘-N’ Model)
- 10Step Programs for Temperature(‘-N’ Model)
- Repeat and Reservation Driving Program(‘-N’ Model)

Shaking Incubator	VS-38SIF	VS-38SIF-P
Display	LED Display	Back-lit LCD
Programmability	—	4 Speed Step / 10 Temp. Program
Temp. Controller	Digital PID Controller	
Temp. Range	10°C to 60°C	
Speed Range	20 ~ 350 RPM	
Motor	Brushless DC Motor	
Circulation Fan	5" Convection Fan × 2EA	
Dimension (in)	830 × 540 × 370(H)mm (Working Plate), 165Liter	
(out)	1,060 × 725 × 890(H)mm	
Lid	Silicone Packing & Shock-absorber	
Safety Device	Over Temp. Protector, Door Detector	
Weight	137.5kg	
Power	220V, 1.32KW, 60Hz	
Standard Plate	Flat form Plate	

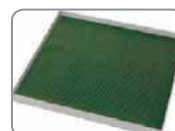
Light Bank	VS-38SIF-L	VS-38SIF-P-L
Light Bank	LED Bar X 3EA	
Photoperiod	24Hr, Photoperiod Program	



Option



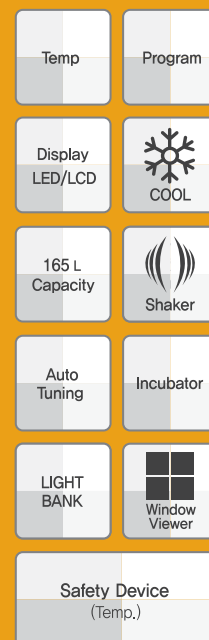
Plate of Flask
PL-38PF



Flat-form Plate
PL-38FF



Spring Rack
PL-38SR



Standard Items

Main Body
Flat Form Plate
Power Cable
Manual

Plate

100ml Flask ... 60EA
250ml Flask ... 40EA
500ml Flask ... 24EA
1000ml Flask ... 15EA
2000ml Flask ... 8EA
Flat-form Plate ...
760×470mm
Spring Rack ...
760×470mm

Shaking Incubator

VS-39SIF

- A adjustable Shelf for The stationary culture is equipped on upper section, a shaker for shake culture is equipped on lower section.
- Stable working on 20RPM
- Digital PID Controller
- Trustworthy Safety Device
- Available various volume of Flask, large volume of Flask have High height and test tube.
- Light Bank ('-L' Model)
- 10Step Program for Temperature('P' Model)



Standard Items

Main Body
Flat-form Plate
Shelf
Power Cable
Manual

Plate

100ml Flask ... 36EA
250ml Flask ... 25EA
500ml Flask ... 16EA
1000ml Flask ... 9EA
2000ml Flask ... 9EA
Flat-form Plate ...
450×450mm
Spring Rack ...
450×450mm

Shaking Incubator	VS-39SIF
Temp. Control	Digital PID Controller
Temp. Range	10℃ to 60℃
Speed Range	20 ~ 350 RPM
Display	LED Display
Motor	Brushless DC Motor
Circulation Fan	5" Convection Fan × 2EA
Dimension (in)	520 × 600 × 790(H)mm (Working Space), 246Liter
(out)	890 × 850 × 1,565(H)mm
Door	Silicone Packing Door with Window
Safety Device	Over Temp. Protector, Door Detector
Shelf	1EA, Adjustable Type
Weight	126kg
Power	220V, 1.2KW, 60Hz
Standard Plate	Flat form Plate

Light Bank	VS-39SIF-L
Light Bank	LED Bar X 4EA
Photoperiod	24Hr, Photoperiod Program

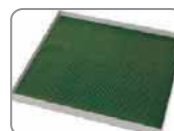
Program Model	Model Name + '-P'
Temp. Controller	10 Step Programmeable Controller



Option



Plate of Flask
PL-39PF



Flat-form Plate
PL-39FF

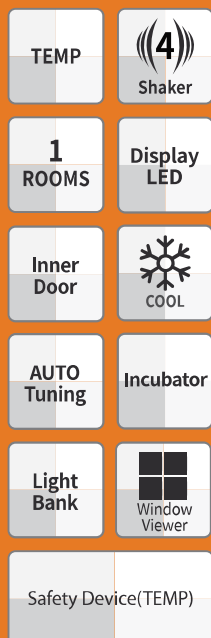


Spring Rack
PL-39SR

Multi-Spin Shaking Incubator

VS-39M4 / VS-39M2

- / Many shakers are in a unit for saving space
- / Stable Working on 20RPM
- / Digital PID Controller
- / Available various volume of Flask and Tubes
- / Available Light Bank (Option)
- / Large Capacity Shaking incubator (250ml x 84 Flask, 250ml x 168 Flask / '-L' Model)



Standard Items

Main Body
Flat Form Plate
Power Cable
Manual

Plate(-M2, -M4)

100ml Flask ... 36EA
250ml Flask ... 25EA
500ml Flask ... 16EA
1000ml Flask ... 9EA
2000ml Flask ... 9EA
Flat-form Plate ...
450x450mm
Spring Rack ...
450x450mm

※ VS-39M2-L, VS-39M4-L
(Ask it separately)

4 Shakers

Multi-Spin Shaking Incubator	VS-39M4	VS-39M4-L
Dimension (in)	650 × 700 × 1,800(H)mm, 819L	700 × 700 × 1,900(H)mm, 931L
(out)	1,380 × 840 × 2,005(H)mm (Body)	1,435 × 810 × 2,080(H)mm (Body)
Flask Capacity	Max, 1000ml × 36EA (9EA × 4 Stage)	Max, 2000ml × 36EA (9EA × 4 Stage)
Holder Plate	450 × 450mm	630 × 630mm
Motor	Brushless D.C Motor	
Shaking Unit	4 Shakers	
Temp. Controller	Digital PID Controller	
Temp. Range	10°C to 60°C	
Speed Range	20 ~ 350 RPM	
Power	220V, 1.2KW, 60Hz	

2 Shakers

Multi-Spin Shaking Incubator	VS-39M2
Dimension (in)	650 × 750 × 1,000(H)mm, 488L
(out)	1,350 × 850 × 1,310(H)mm (Body)
Flask Capacity	Max, 1000ml × 18EA (9EA × 2 Stage)
Motor	Brushless D.C Motor
Shaking Unit	2 Shakers
Temp. Controller	Digital PID Controller
Temp. Range	10°C to 60°C
Speed Range	20 ~ 350 RPM
Power	220V, 1.2KW, 60Hz

* Plate Size and shape can be changed for better quality

Option



Plate of Flask
PL-39PH



Flat-form Plate
PL-39FF



Spring Rack Plate
PL-39SR



VS-39M2



VS-39M4/VS-39M4-L

Multi-Spin Shaking Incubator

VS-39M4-DT [Dual Type] VS-39M2-DT [Dual Type]

- 2 independent Shaker are worked with various test condition
- 2 shakers or 4 shakers can be worked on a unit for saving space
- Stable working on 20RPM
- Digital PID Controller
- Available various volume of Flask and Tubes
- Available Light Bank (Option)

Multi-Spin Shaking Incubator	VS-39M4-DT	VS-39M4DT-L
Dimension (in)	650 × 700 × 880(H)mm, 400L × 2Chamber	700 × 700 × 950(H)mm, 465L × 2Chamber
(out)	1,385 × 840 × 2,215(H)mm (Body)	1,435 × 810 × 2,290(H)mm (Body)
Flask Capacity	Max. 1,000ml × 36EA (9EA × 4 Stage)	Max. 2,000ml × 36EA (9EA × 4 Stage)
Holder Plate	450 × 450mm	630 × 630mm
Motor	Brushless D.C Motor	
Shaking Unit	4 Shakers	
Room	2 Chamber	
Temp. Controller	Digital PID Controller	
Temp. Range	10°C to 60°C	
Speed Range	20 ~ 350 RPM	
Circulation Fan	5" Convection Fan × 8EA	
Door	Silicone Packing Door with Window	
Safety Device	Over Temp. Protector, Door Detector	
Power	220V, 2.5KW, 60Hz	

Multi-Spin Shaking Incubator	VS-39M2-DT	VS-39M2DT-L
Dimension (in)	650 × 700 × 500(H)mm, 228L × 2Chamber	700 × 700 × 600(H)mm, 294L × 2Chamber
(out)	1,310 × 840 × 1,460(H)mm (Body)	1,435 × 810 × 1,660(H)mm (Body)
Flask Capacity	Max. 1,000ml × 18EA (9EA × 2 Stage)	Max. 2,000ml × 18EA (9EA × 2 Stage)
Shaking Unit	2 Shakers	
Room	2 Chamber	
Temp. Range	10°C to 60°C	
Speed Range	20 ~ 350 RPM	
Power	220V, 2.2KW, 60Hz	



VS-39M4DT

Option

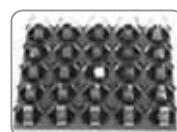
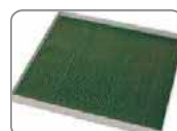


Plate of Flask
PL-39PH



Flat-form Plate
PL-39FF



Spring Rack Plate
PL-39SR

Temp	4 Shaker
2 ROOMS	Display LED
800L/930L Capacity	COOL
AUTO Tuning	Incubator
Light Bank	Window Viewer
Safety Device(TEMP)	

Standard Items

Main Body
Flat Form Plate
Power Cable
Manual

Plate(-M2DT,-M4DT)

100ml Flask ... 36EA
250ml Flask ... 25EA
500ml Flask ... 16EA
1000ml Flask ... 9EA
2000ml Flask ... 9EA
Flat-form Plate ...
450x450mm
Spring Rack ...
450x450mm

※ VS-39M2DT-L,
VS-39M4DT-L
(Ask it separately)

SHAKER

03

Vision Scientific
SHAKER



Shaker

VS-201D, VS-202D, VS-203D

- / Brushless DC Motor With Low Noise(30dB)
- / Strong Beltless Drum without Belt
- / Stable Working on 20RPM
- / 999hr integration Timer
- / Trustworthy Safety Device
- / Easy to Use
- / Various size (3 Type VS-201D, VS-202D, VS-203D)
- / Orbital and Reciprocal type

Specification	
Max. Speed	350RPM
Min. Speed	20RPM
Display	Digital FND Display
Timer	99Hr, 59Min
Motion	Orbital Or Reciprocal
Drive	Beltless Direct Drive
Motor	Brushless DC Motor
Stroke	20mm



Shaker – Orbital type

Model	VS-201D	VS-202D	VS-203D
Max. Capacity	4,000ml, 2,000ml × 2EA	8,000ml, 2,000ml × 4EA	16,000ml, 2,000ml × 8EA
Dimension	360 × 360 × 110(H)mm	470 × 490 × 115(H)mm	745 × 490 × 115(H)mm
Max. Speed	350 RPM	350 RPM	350 RPM
Weight	20 Kg	28 Kg	40 Kg
Power	100–240V, 40W, 60Hz		



Shaker – Reciprocal type

Model	VS-201DR	VS-202DR	VS-203DR
Max. Capacity	4,000ml, 2,000ml × 2EA	8,000ml, 2,000ml × 4EA	16,000ml, 2,000ml × 8EA
Dimension	360 × 360 × 110(H)mm	470 × 490 × 115(H)mm	745 × 490 × 115(H)mm
Max. Speed	250 RPM	250 RPM	250 RPM
Weight	20 Kg	28 Kg	40 Kg
Power	100–240V, 40W, 60Hz		

Capacity

Flask	VS-201D	VS-202D	VS-203D
100ml	16	36	60
250ml	9	25	40
500ml	9	16	24
1000ml	4	9	15
2000ml	2	4	8
Plate Size	350 x 320mm	450 x 450mm	760 x 470mm

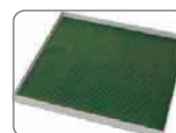


VS-202D

Option



Plate of Flask
PL-20PM



Flat-form Plate
PL-20FM



Spring Rack
PL-20SM

Beltless
DRUM

< 30dB

Reciprocal

Integration
Timer

Orbital

FND
Display

350
RPM

Standard Items

Main Body
Flat-form Plate
Power Cable
Manual

Programmable Shaker

VS-201P, VS-202P, VS-203P

- / Brushless DC Motor with low noise (30dB)
- / Beltless Drum Type for long life
- / Stable working on 20RPM
- / 4Step Program for Speed and Time
- / Available Step Drive, Frequency Drive and Delay Start
- / Trustworthy Safety Device
- / Easy to Use
- / Various size(3 Type/VS-201P,VS-202P,VS-203P)
- / Orbital and Reciprocal type



Programmable Shaker - Orbital type

Model	VS-201P	VS-202P	VS-203P
Max. Capacity	4,000ml, 2,000ml × 2EA	8,000ml, 2,000ml × 4EA	16,000ml, 2,000ml × 8EA
Dimension	360 × 360 × 110(H)mm	470 × 490 × 115(H)mm	745 × 490 × 115(H)mm
Max. Speed	350 RPM	350 RPM	350 RPM
Weight	20 Kg	28 Kg	40 Kg
Power	220V, 50W, 60Hz		

Specification	
Max. Speed	350RPM
Min. Speed	20RPM
Motion	Orbital Or Reciprocal
Controller	Microprocessor Control
Program	4 Step
Timer	99Hr, 59Min
Display	Back-lit LCD
Drive	Beltless Direct Drive
Motor	Brushless DC Motor
Stroke	20mm

* Order Made for Stroke Length is available



Programmable Shaker - Reciprocal type

Model	VS-201PR	VS-202PR	VS-203PR
Max. Capacity	4,000ml, 2,000ml × 2EA	8,000ml, 2,000ml × 4EA	16,000ml, 2,000ml × 8EA
Dimension	360 × 360 × 110(H)mm	470 × 490 × 115(H)mm	745 × 490 × 115(H)mm
Max. Speed	250 RPM	250 RPM	250 RPM
Weight	20 Kg	28 Kg	40 Kg
Power	220V, 50W, 60Hz		

Capacity

Flask	VS-201P	VS-202P	VS-203P
100ml	16	36	60
250ml	9	25	40
500ml	9	16	24
1000ml	4	9	15
2000ml	2	4	8
Plate Size	350 × 320mm	450 × 450mm	760 × 470mm

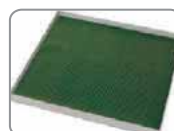


VS-202P

Option



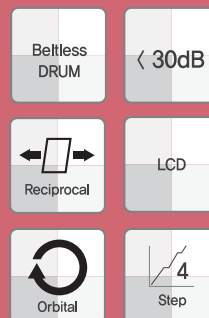
Plate of Flask
PL-20PM



Flat-form Plate
PL-20FM



Spring Rack
PL-20SM



Standard Items

Main Body
Flat-form Plate
Power Cable
Manual

Standard Items

Main Body
Frame
4 Shakers
Flat-form Plate
Power Cable
Manual

Multi Shaker

VS-202DX, VS-203DX, VS-202PX, VS-203PX

- / 4 Shakers can be working on diferent speed separately
- / 4 shakers in a frame for saving space
- / Strong Frame can be assembled easily
- / Available install in the Cold Room
- / 2 size(Large and Midium size)

Multi Shakers

Model	Capacity	Dimension
VS-203PX	VS-203P X 4Sets	1,190 X 770 X 1,900(H)mm
VS-203DX	VS-203D X 4Sets	1,190 X 770 X 1,900(H)mm
VS-202PX	VS-202P X 4Sets	760 X 710 X 1,900(H)mm
VS-202DX	VS-202D X 4Sets	760 X 710 X 1,900(H)mm

Specification

Max, Speed	350 RPM
Min, Speed	20 RPM
Motion	Orbital / Reciprocal
Drive System	Beltless direct drive
Motor	Brushless DC Motor
Noise	< 30dBA

Flask	VS-202DX / VS-202PX	VS-203DX / VS-203PX
100ml Flask	144 EA	240 EA
250ml Flask	100 EA	160 EA
500ml Flask	64 EA	96 EA
1000ml Flask	36 EA	60 EA
2000ml Flask	16 EA	32 EA



- Shaker Accessories

Plate of Flask



Capacity

	PL-20PL	PL-20PM	PL-20PS
Flask 100ml	60	36	16
250ml	40	25	9
500ml	24	16	9
1000ml	15	9	4
2000ml	8	4	2
Plate Size	760 x 470	450 x 450	350 x 320
적용 제품	VS-203D(P) VS-203D(P)X	VS-202D(P) VS-202D(P)X	VS-201D(P)

Flask Holder



HD-250 / HD-500
One piece type
250ml, 500ml

Spring Rack



PL-20SL
760 x 470 mm
For VS-203D(P), VS-203D(P)X

PL-20SM
450 x 450 mm
For VS-202D(P), VS-202D(P)X

PL-20SS
350 x 320 mm
For VS-201D(P)

Flat-form Plate



PL-20FL
760 x 470 mm
For VS-203D(P), VS-203D(P)X

PL-20FM
450 x 450 mm
For VS-202D(P), VS-202D(P)X

PL-20FS
350 x 320 mm
For VS-201D(P)

Plate of Tube Rack



PL-20TL
760 x 470 mm
For VS-203D(P), VS-203D(P)X

PL-20TM
450 x 450 mm
For VS-202D(P), VS-202D(P)X

PL-20TS
350 x 320 mm
For VS-201D(P)

Multi Purpose Plate

Multi purpose Type 1



PL-20M1-L
Size : 665 x 455mm

PL-20M1-M
Size : 460 x 460mm

Multi purpose Type 2



PL-20M2-L
Size : 665 x 455mm

PL-20M2-M
Size : 460 x 460mm

Multi purpose Type 3



PL-20M3-M
Size : 490 x 420mm

Mixing tube plate



PL-20MT
Large : 736 x 440mm Tube 30EA
Medium : 486 x 440mm Tube 20EA
Small : 386 x 340mm Tube 6EA

Giant Shaker

VS-1205GS / VS-1205GS-D



VS-1205GS



VS-1205GS-D

Giant Shaker	VS-1205GS
Speed Range	20 – 200 RPM (Stroke 27mm)
Speed Controller	Microprocessor controller
Display	Digital Display
Motion	Orbital (Stroke 27mm)
Drive System	Inverter drive motor system
Capacity	250ml Flask x 100EA (OPTION) VS-1205GS-D (200EA)
Plate Dimension	1,000 x 1,000mm x 1stage (OPTION) VS-1205GS-D (2 Stage)
Stage Height	420mm
Material (Body)	Steel plate with powder coating
(Support)	SUS 304
Power	220V, 1.5KW, 60Hz

Digital Vortex Mixer

VS-1300VM

- Touch On and Constant Mode
- Max. 3,500RPM
- Control by Soft Touch and Jog dial
- Ergonomics Design
- Free Voltage(100-240V)
- Stable Platform
- Digital FND Display
- Easy to use



Digital Vortex Mixer	VS-1300VM
Max Speed	3,500RPM
Display	FND Display
Operation Mode	Touch On & Constant On
Material	Aluminum Die-Casting / ABS
Head	Platform Head
Stroke	Dia. 3,8mm
Dimension	155 x 135 x 110(H)mm
Weight	2Kg
Power	100-240V, 40W, 50/60Hz

Vortex Mixer

KMC-1300V

- Available Manual working Mode(Touch on Mode)
- Available Automatic working Mode(Constant Mode)
- Adjustable Speed upto 3,000RPM
- Various kinds of Accessories
- High Quality and Safety Design



Vortex Mixer	KMC-1300V
Max Speed	3,000 RPM
Operation Mode	Touch On & Constant On
Material	Aluminum Die-casting & ABS
Head	Mixing Cup Head
Stroke	3,8mm
Dimension / Weight	130 x 155 x 155(H)mm, 3kg
Power	220V, 20W, 60Hz



Option

V130001	Mixing Cup Head
V130002	Platform Head
V130003	Micro plate Kit Head
V130004	Multi sample plate Kit Head

Standard Items

Main Body
Mixing Cup Head (V130001)
Power Cable
Manual

Vortex Mixer

VS-1300VA

- Available Manual working Mode(Touch on Mode)
- Available Automatic working Mode(Constant Mode)
- Adjustable Speed upto 3,300RPM
- Various kinds of Accessories
- High Quality and Safety Design



Vortex Mixer	VS-1300VA
Max, Speed	3,300 RPM
Operation Mode	Touch On & Constant On
Driving Motor	Brushless Shade Motor
Head	Mixing Cup Head
Stroke	Dia. 4mm (Orbital)
Speed Control	Stepless
Material	Powder Coated Aluminum
Max, Loading	0,5kg
Dimension / Weight	130 x 180 x 138(H)mm, 2,5kg
Power	220V, 30W, 60Hz

Standard Items

Main Body
Mixing Cup Head (V130001)
Power Cable
Manual

Standard Items

Main Body
Ceramic Plate
Power Cable
Manual

Option)
Magnetic Bar

Digital Hotplate & Magnetic Stirrer

VS-230HS-D

- / Digital Fuzzy Controller with Touch Button
- / High Fidelity LCD, Convenient Jog Dial
- / Highly Durability and Resistance Safety Platform
- / Max. 400 °C, 80 to 1,500rpm
- / Safety Platform
- / Brushless Shade Motor
- / 20Lit. 180 x 180mm Plate



Digital Hotplate & Magnetic Stirrer		VS-230HS-D
Plate Dimension		180 × 180 mm
Stirrer Speed Range		80 to 1,500rpm
Speed Control Resolution		5RPM
Maximum Stirring Volume (H ₂ O)		20 Liter
Heating Temperature		Max. 400°C
Temp Accuracy		0.3°C
Temp Resolution	Display	0.1°C
	Control	0.5°C
Controller		Digital Fuzzy Controller with Touch Button & Jog Dial
Timer		99hr 59min
Display		Full Digital LCD Display with Back-Light Function
Heating Output		600W
Motor Type		Brushless Shade Motor
Permissible Temp. & Humidity		5°C ~ 40°C, < 80%
Maximum Magnetic Stirrer Bar		50mm
Safety Devices		Over Temp Protector
Material	Plate	Ceramic Coated Aluminum
	Body	Powder Coated Aluminum
Power Consumption		650W
Power Supply		220V, 50/60Hz
Dimension		180 × 325 × 110(H)mm
Weight		3.1kg

Standard Items

Main Body
Ceramic Plate
Power Cable
Manual

Option)
Magnetic Bar

Hotplate & Magnetic Stirrer

VS-230HS

- / Fine & Durable Analog models
- / PWM control in heat control
- / Stepless in speed control
- / Max. 400 °C, Max. 1,500rpm
- / Brushless Shade Motor
- / 20Lit. 180 x 180mm Plate



Hotplate & Magnetic Stirrer		VS-230HS
Plate Dimension		180 × 180 mm
Stirrer Speed Range		Max. 1,500rpm
Maximum Stirring Volume (H ₂ O)		20 Lit.
Heating Temperature		Max. 400°C
Heat Control		Fine PWM Controller
Speed Control		Stepless
Heating Output		600W
Motor Type		Brushless Shade Motor
Permissible Temp. & Humidity		5°C ~ 40°C, < 80%
Maximum Magnetic Stirrer Bar		50mm
Material	Plate	Ceramic Coated Aluminum
	Body	Power Coated Aluminum
Power Consumption		650W
Power Supply		220V, 50/60Hz
Dimension		180 × 325 × 110(H)mm
Weight		3.1kg

Accessories(Optional)



Overhead Stirrer

VS-231OS / VS-232OS

- Excellent and Strong Stepless Control(VS-231OS)
- Digital Fuzzy Controller (VS-232OS)
- Anti-Trembling for shaking stability
- Jog dial Control for convenience
- Safe and strong Chuck
- Trustworthy Safety device



Overhead Stirrer	VS-231OS-25	VS-231OS-40	VS-231OS-60
Stirring Capacity	Max, 25 Lit. (H ₂ O)	Max, 40 Lit. (H ₂ O)	Max, 60 Lit. (H ₂ O)
Maximum Viscosity	70,000 mPas	100,000 mPas	150,000 mPas
Maximum Torque	200 Ncm	300 Ncm	450 Ncm
Gear Rate	2,0:1	3,0:1	4,5:1
Speed Range	100 to 2,000rpm	80 to 1,200rpm	50 to 800rpm
Motor Rating (Input/Output)	110 / 85W		
Speed Control	Stepless		
Max. Impeller Shaft Diameter	10mm		
Permissible Temp. & Humidity	0 ~ 40°C, 80%		
Safety Device	Over Heat Protector for Motor		
Material	ABS and Aluminum		
Power Consumption	150W	170W	200W
Power	220V, 50/60Hz		



Digital Overhead Stirrer	VS-232OS-25	VS-232OS-40	VS-232OS-60
Stirring Capacity	Max, 25 Lit. (H ₂ O)	Max, 40 Lit. (H ₂ O)	Max, 60 Lit. (H ₂ O)
Maximum Viscosity	70,000 mPas	100,000 mPas	150,000 mPas
Maximum Torque	200 Ncm	300 Ncm	450 Ncm
Gear Rate	2,0:1	3,0:1	4,5:1
Speed Range	100 to 2,000rpm	80 to 1,200rpm	50 to 800rpm
Motor Rating (Input/Output)	110 / 85W		
Timer	99hr 59min		
Display	Digital LCD Display with Back-Light Function		
Controller	Digital Fuzzy Controller with Touch Button & Rotary Switch		
Max. Impeller Shaft Diameter	10mm		
Permissible Temp. & Humidity	0 ~ 40°C, 80%		
Safety Device	Overload & Heat Protector for Motor		
Material	ABS and Aluminum		
Power Consumption	150W	170W	200W
Power	220V, 50/60Hz		

Option



OSSR010



OSSR020



OSHC010

Model Name	Description
OSSR010	Standard Plate Stand, for Overhead Stirrer and Homogenizer, 25x37cm Plate with Rod and Silicone Pad
OSSR020	Safety Stand, U-type, 34 x 29 cm Stand Base, with Rod
OSHC010	Clamp for Overhead Stirrers and Homogenizers, up to Ø23mm Rod

Stirring Tools with Exchangeable Blades for Overhead Stirrers

Model Name	Description
OSIP010	Impeller, Propeller, 3 x bladed, Ø8 rod, Ø50 mm blade
OSIP011	Impeller, Propeller, 3 x bladed, Ø8 rod, Ø60 mm blade
OSIP012	Impeller, Propeller, 3 x bladed, Ø8 rod, Ø80 mm blade
OSIP013	Impeller, Propeller, 3 x bladed, Ø8 rod, Ø100 mm blade

Model Name	Description
OSIP020	Impeller, Propeller, 4 x bladed, Ø8 rod, Ø70 mm blade
OSIP021	Impeller, Propeller, 4 x bladed, Ø8 rod, Ø90 mm blade
OSIP022	Impeller, Propeller, 4 x bladed, Ø8 rod, Ø100 mm blade
OSIP030	Impeller, Diamond, 4 x bladed, Ø8 rod, Ø90 mm blade
OSIP031	Impeller, Diamond, 4 x bladed, Ø8 rod, Ø100 mm blade
OSIP040	Impeller, Centrifugal, 2 x bladed, Ø8 rod, Ø100 mm blade
OSIP050	Impeller, Centrifugal, Teflon-coated, 2 x bladed, Ø8 rod, Ø90 mm blade
OSIP051	Impeller, Centrifugal, Teflon-coated, 2 x bladed, Ø8 rod, Ø120 mm blade
OSIP060	Impeller, Anchor, 2 x bladed, Ø8 rod, Ø70 mm blade
OSIP061	Impeller, Anchor, 2 x bladed, Ø8 rod, Ø90 mm blade
OSIP111	Impeller, Propeller, 3 x bladed, Ø10 rod, Ø60 mm blade
OSIP112	Impeller, Propeller, 3 x bladed, Ø10 rod, Ø80 mm blade
OSIP113	Impeller, Propeller, 3 x bladed, Ø10 rod, Ø100 mm blade
OSIP121	Impeller, Propeller, 4 x bladed, Ø10 rod, Ø90 mm blade
OSIP122	Impeller, Propeller, 4 x bladed, Ø10 rod, Ø100 mm blade
OSIP131	Impeller, Diamond, 4 x bladed, Ø10 rod, Ø100 mm blade
OSIP141	Impeller, Anchor, 2 x bladed, Ø10 rod, Ø90 mm blade
OSIP142	Impeller, Anchor, 2 x bladed, Ø10 rod, Ø140 mm blade

Standard Items

Main Body
Power Cable
Manual

Homogenizer

VS-240HZ / VS-241HZ

- High Speed Homogenizer on Max. 27,000 RPM
- Digital Fuzzy Controller, FND Display(VS-241HZ)
- Stepless Control
- Anti-Trembling for Shaking Stability
- Safe and Strong Dispersing Tool
- Trustworthy Safe Device



Standard Items

Main Body
Power Cable
Manual

Homogenizer	VS-240HZ	VS-241HZ
Speed Range	About 27,000rpm (without load)	2,000 to 27,000rpm (without load)
Maximum Volume (H ₂ O)	2,500ml	
Motor Rating (Input/Output)	400W / 300W	
Speed Control	Stepless	
Display	N/A	3 Digit FND
Safety Devices	Over Heat Protector	
Permissible Temp. & Humidity	5℃ ~ 40℃, < 80%	
Usable Dispersing Tool	Ø8mm Stator "HZ1008", Ø10mm Stator "HZ1010" Ø18mm Stator "HZ1018", Ø25mm Stator "HZ1025"	
Material	ABS & Aluminum Stainless Steel(#304)-Tool	
Extension Arm Size	Ø12.7 x L250mm	
Power Consumption	400W	
Power Supply	220V, 50/60Hz	

Option



Dispersing Tool for Homogenizer		Model Name	Description
HZ1008	Homogenizer Tool, Rotor Ø6.1, stator Ø8, 1~50ml	OSSR010	Standard Plate Stand, for Overhead Stirrer and Homogenizer, 25x37cm Plate with Rod and Silicone Pad
HZ1010	Homogenizer Tool, Rotor Ø7.5, stator Ø10, 1~100ml	OSHC010	Clamp for Overhead Stirrers and Homogenizers, up to Ø23mm Rod
HZ1018	Homogenizer Tool, Rotor Ø12.7, stator Ø18, 1~1,000ml		
HZ1025	Homogenizer Tool, Rotor Ø17, stator Ø25, 50~2,500ml		

Twister

VS-96TW



- / Shaker with 45° tilt working
- / Non-Skid Rubber mat on the Plate
- / Quiet, Vibration Free Operation
- / Suitable test for Hybridization Tube and normal test tubes



Standard Items

Main Body
Non-Slip Pad
Power Cable
Manual

Twister	VS-96TW	VS-96TWL
Speed Range	6 – 65 (OPM)	
Speed Controller	Electronic controller	
Drive Motor	Brushless Geared Motor	
Dimension	260 x 240 x 250(H)mm	
Tilt Angle	0 – 45°	
Motion	Orbital Rocking Motion	
Plate Size	260 X 235mm	395 X 235mm
Mat	Dimpled Rubber Mat	
Weight	5 Kg	
Power	220V, 30W, 60Hz	

Mini Twister

VS-96TWS



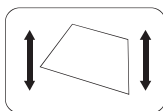
Standard Items

Main Body
Non-Slip Pad
Power Cable
Manual

Mini Twister	VS-96TWS
Speed Range	25(OPM)
Drive Motor	Synchronous motor
Dimension	230 x 132 x 135(H)mm
Tilt Angle	20°
Plate Size	132 x 238mm
Mat	Dimpled Rubber Mat
Weight	1 Kg
Power	220V, 11W, 60Hz

Rocker

VS-95RK



- / Shaker is worked by tilt movement(Up and down direction)
- / Quite and not much Vibration
- / Suitable staining and DE-Staining of Gel after Electrophoresis
- / Suitable Mixing, Dilution, Solution and others of Liquid
- / Available 2 Stage Tray (VS-95RKD)



Rocker	VS-95RK	VS-95RKD
Speed Range	6 – 64 (OPM)	
Speed Controller	Electronic controller	
Drive Motor	Brushless Geared Motor	
Angle	28°	
Tray Size	355 x 280mm	355 x 280 x 150(H)mm
Dimension	355 x 280 x 170(H)mm	
Weight	7 Kg	9 Kg
Power	220V, 14W, 60Hz	

Hula

VS-99HL



- / Orbital driving like Hula
- / Quite and not much Vibration
- / Suitable Stringing and De-Stringing of Gel after Electrophoresis
- / Suitable Mixing, Dilution, Solution and others of Liquid



Hula	VS-99HL
Speed Range	1 – 36 RPM
Speed Controller	Electronic controller
Drive Motor	Mechanical Geared Motor
Pitch Angle	Max, 15°
Dimension	308 x 308 x 220(H)mm
Plate	Flat-form type
Plate Size	310 x 310 mm
Stroke	20 to 40mm, Adjustable
Weight	7 Kg
Power	220V, 25W, 60Hz

Standard Items

Main Body
Non-Slip Pad
Power Cable
Manual

Standard Items

Main Body
Non-Slip Pad
Power Cable
Manual

Rotary Drum Mixer

VS-98M



- / Adjustable Rotation Speed regularly
- / Adjustable Tilt Angle from horizontality to verticality
- / Usable in the Incubator or Clean Bench
- / Easy to exchange of Medium on test tube culture
- / Suitable Mixing, Dilution, Solution and others of Liquid



Standard Items

Main Body
Drum (DR-15)
Power Cable
Manual

Rotary Drum Mixer	VS-98M
Speed Range	1 – 10 RPM
Speed Controller	Electronic controller
Drive Motor	Brushless Geared Motor
Timer	60min, and Hold
Tilt Angle	0 – 90°
Dimension	300 x 330 x 325(H)mm
Drum Standard	DR-15 (15ml tube x 60EA), Dia. 17mm
Weight	10 Kg
Power	220V, 31W, 60Hz
Drum (Option)	
DR-50	50ml Tube x 36 EA Dia. 30mm
DR-01	100ml Flask x 8 EA

Roller Mixer

VS-960R



- / Fast and soft rotation and mixing
- / Strong Plastic Material Roller
- / Low Noise and strong plastic Gear
- / Stainless base Plate



Standard Items

Main Body
Power Cable
Manual

Roller Mixer	VS-960R	VS-960RD
Roller	5EA	10EA
Speed	40RPM	50RPM
Roller Length	325mm	325mm
Dimension	480×220×110(H)mm	480×420×110(H)mm
Weight	5 Kg	9 Kg
Power	220V, 20W, 60Hz	

Dry Block Heater (Dry Bath)

VS-251D12 / VS-251D13 / VS-251D3

- / Usable various kinds of test tube
- / Various Model (1 Block ~ 3 Block/ 1 Controller ~ 3 Controller)
- / High Precision Temperature Distribution
- / Available the unit for high temperature (Model name -H120 or -H200)

Standard Items

Main Body
Block
Power Cable
Manual

Dry Block Heater	VS-251D12	Option	VS-251D3	Option
Temp. Range	Ambient +5°C to 105°C	Ambient to 130°C, 200°C	Ambient to 105°C	Ambient to 130°C, 200°C
Temp. Controller	Digital P.I.D Controller		Digital P.I.D Controller	
Display	7-Segment LED Display		7-Segment LED Display	
Dimension	200 × 270 × 90(H)mm		316 × 300 × 90(H)mm	
Block Size	74.5 × 95 × 50(H)mm		74.5 × 95 × 50(H)mm	
Capacity	1.5ml × 20 Hole (2EA)		1.5ml × 20 Hole (3EA)	
Weight	5 Kg		8 Kg	
Power	220V, 200W, 60Hz		220V, 300W, 60Hz	

Model Name	Temp. Range	Model Name	Temp. Range	Model Name	Temp. Range	Controller	Block
VS-251D1	Max. 105°C	VS-251D1H-130	Max. 130°C	VS-251D1H-200	Max. 200°C	1	1
VS-251D2		VS-251D2H-130		VS-251D2H-200		2	2
VS-251D3		VS-251D3H-130		VS-251D3H-200		3	3
VS-251D12		VS-251D12H-130		VS-251D12H-200		1	2
VS-251D13		VS-251D13H-130		VS-251D13H-200		1	3



VS-251D12



VS-251D3

BLOCK



B 1,520
1.5ml Tube × 20EA
74.5 × 95 × 50(H)mm



B 1020
10ml Tube × 20EA
74.5 × 95 × 50(H)mm



B 306
30ml Tube × 6EA
74.5 × 95 × 50(H)mm



B 504
50ml Tube × 4EA
74.5 × 95 × 50(H)mm

For High TEMP(Optional)



VS-251D12H-130



VS-251D2H-200

Dry Block Heater

VS-251L

- / Inconrodible Steel with Powder Coating
- / Easy to set Temperature and driving by Digital PID Controller
- / Clear LED Display
- / Available Max. 3 Block (8 Hole) for many Syringes (MODEL: VS-THC)
- / Alarm Function by Timer
- / Compact sized Dry Block Heater
- / Available Various Test on high and low Temperature together
- / KGMP, ISO9001, ISO14001, ISO13485



Dry Block Heater	VS-251L
Temp. Range	4°C (Block - 1), 110°C (Block - 2)
Temp. Control	Digital P.I.D Controller
Display	7-Segment LED Display
Dimension	320 × 300 × 360(H)mm
Block Size	74.5 × 95 × 145(H)mm
Capacity	1cc Syringe × 8 Hole (2EA)
Weight	15 Kg
Power	220V, 300W, 60Hz

Standard Items

Main Body
8 Hole Block
Power cable
Manual

Dry Block Heater

VS-THC



Dry Block Heater	VS-THC
Temp. Range	70°C (Block - 1), 90°C (Block - 2), 8°C (Block - 3)
Temp. Controller	Digital P.I.D Controller
Display	7-Segment LED Display
Dimension	320 × 480 × 360(H)mm
Block Size	74.5 × 95 × 145(H)mm
Capacity	1cc Syringe × 8 Hole (3EA)
Weight	23Kg
Power	220V, 500W, 60Hz

Standard Items

Main Body
8 Hole Block
Power cable
Manual



WATER BATH

04

Vision Scientific

WATER BATH



Standard Items

Main Body
Lid
Power Cable
Manual

Option)
Rack for Test Tube

Water Bath

VS-310S / VS-310

- / Multi Purpose Water Bath on Room Temperature
- / One-piece Stainless Bath
- / Easy to set the Temperature by Touch-key(LED Display)
- / Available Internal Circulation Pump on the unit(Option, 'P' Model)
- / Digital PID Controller
- / Auto Tuning Function for High Precision



Single Bath

Water Bath	VS-310S	VS-310
Dimension (in)	300 × 240 × 150(H)mm	495 × 290 × 150(H)mm
(out)	430 × 350 × 335(H)mm	760 × 350 × 335(H)mm
Bath Capacity	10,8 Liter	21 Liter
Power	220V, 500W, 60Hz	220V, 800W, 60Hz
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient +5°C to 99°C	
Temp. Accuracy	±0,2°C at 37°C	
Display	LED Display	
Material (in)	Stainless Steel	
(out)	Steel Plate with Powder Coating	
Lid	Stainless Steel	

Water Bath	VS-310SP	VS-310P
Circulation Pump	Internal Pump, 15 Liter/min,	

※ 'P' Model : VS-310 or VS-310S Model + Circulation Pump.

Multi-Water Bath

VS-310S-D / VS-310S-T

- / Available Multi Temperature Test on Saving Space
- / 2 Bath and 3 Bath Model



Multi Bath

Water Bath	VS-310S-D	VS-310S-T
Bath_1 Size	320 × 240 × 150(H)mm	320 × 240 × 150(H)mm
Bath_2 Size	137 × 240 × 150(H)mm	320 × 240 × 150(H)mm
Bath_3 Size		320 × 240 × 150(H)mm
Bath Capacity	11,5 Liter + 4,9 Liter	11,5 Liter × 3 Bath
Power	220V, 800W, 60Hz	220V, 1,5kW, 60Hz
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient +5°C to 99°C	
Temp. Accuracy	±0,2°C at 37°C	
Display	LED Display	
Material (in)	Stainless Steel	
(out)	Steel Plate with Powder Coating	
Lid	Stainless Steel	

Circulation Water Bath

VS-320CW / VS-320CWF / VS-320CWF2

- For Multi Purpose test on Low and High Temperature
- One-piece Stainless Chamber
- Digital PID Controller
- Easy to set the Temperature by Keypad
- Auto Tuning Function for High Temperature Precision
- Easy to use
- Water Bath with Internal and External Circulation Pump
- Water bath itself have function for Constant Temperature and heat exchanger
- -30°C ~ 150°C (Option)

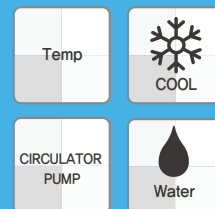
Circulation Water Bath	VS-320CW	VS-320CWF	VS-320CWF2
Temp. Range	Ambient +5°C to 99°C	-20°C to 99°C	-30°C to 99°C
Compressor	None	1/3 HP	1/2 HP
Dimension (in)	490 × 290 × 150(H)mm	325 × 290 × 150(H)mm	325 × 290 × 150(H)mm
Working Access	320 × 290mm	175 × 290mm	175 × 290mm
Capacity	21.5 Liter	14 Liter	14 Liter
Power	220V, 1.6KW, 60Hz	220V, 2.1KW, 60Hz	220V, 2.3KW, 60Hz
Temp. Controller	Digital PID Controller		
Temp. Accuracy	±0.1°C at 37°C		
Circulation Pump	16 Liter/min.		
Material (in)	Stainless Steel		
(out)	Steel Plate with Powder Coating		
Lid	Stainless Steel SUS 304		
Safety Device	High Temperature Protector, Water Level Sensor		



VS-320CW



VS-320CWF / VS-320CWF2



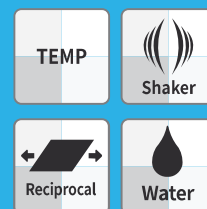
Standard Items

Main Body
Lid (SUS)
Power Cable
Manual

Shaking Water Bath(Reciprocal Type)

VS-310SWR / VS-310SWF

- / Receiprocal Rotation type of Shaking Water Bath
- / Brushless Motor with Low Noise
- / Digital PID Controller
- / Easy to set the Temperature by keypad
- / Auto Tuning for High Temperature Precision
- / Easy to use Spring Rack
- / Trustworthy Safety Device
- / Easy to use
- / Shaking Water Bath for Low Temperature(VS-310SWF)



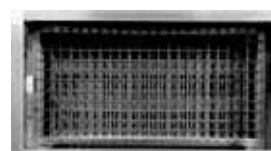
Shaking Water Bath	VS-310SWR	VS-310SWF
Temp. Range	Ambient +5°C to 99°C	-10°C to 99°C
Dimension (in)	600 × 300 × 278(H)-mm	600 × 300 × 278(H)-mm
(out)	820 × 360 × 360(H)-mm	820 × 360 × 710(H)-mm
Capacity	50 Liter	50 Liter
Weight	35kg	50kg
Power	220V, 1.2kW, 60Hz	220V, 1.5kW, 60Hz
Temp. Accuracy	±0.1°C at 37°C	
Temp. Controller	Digital PID Controller	
Speed Range	50 ~ 220 RPM (Stroke 35mm)	
Speed Controller	Digital Control	
Drive Motor	Brushless Motor	
Shaking Motion	Reciprocal	
Stroke	35mm	
Material (in)	Stainless SUS 304	
(out)	Steel Plate with Powder Coating	
Lid	Stainless SUS 304	
Standard Plate	Spring Rack	

Standard Items

Main Body
Lid (SUS)
Power Cable
Manual



Option



Spring Rack(Standard)

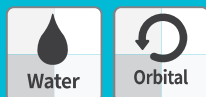
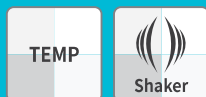


Plate of Flask(Option)
(250ml X 18EA)

Shaking Water Bath(Orbital Type)

VS-310SWO

- / Orbital Type of Shaking Water Bath
- / Brushless Motor with Low Noise
- / Digital PID Controller
- / Easy to set the Temperature by Key pad
- / Auto Tuning for High Temperature Precision
- / Flask holder Rack
- / Trustworthy Safety Device
- / Easy to Use



Standard Items

Main Body
Lid (SUS)
Power Cable
Manual

Shaking Water Bath	VS-310SWO
Temp. Controller	Digital PID Controller
Temp. Range	Ambient +5℃ to 99℃
Temp. Accuracy	±0.1℃ at 37℃
Speed Controller	Solid State Electronic Controller
Speed Range	0 ~ 250RPM
Drive Motor	Brushless Motor
Shaking Motion	Orbital
Dimension (in)	400 X 450 X 245(h)mm
(out)	600 X 560 X 620(h)mm
Capacity	44 Liter
Material (in)	Stainless SUS 304
(out)	Steel Plate with Powder Coating
Lid	Stainless SUS 304
Standard Plate	Holder Plate / 250ml X 12EA
Power	220V, 1.4KW, 60Hz



Option



Plate of Flask (Standard)
250ml X 12EA



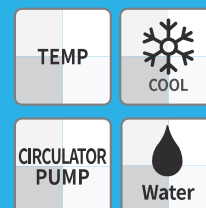
Spring Holder (Option)



Low Temperature Circulator

VS-310FW

- / For Multi Purpose test on Low and High Temperature
- / One-piece Stainless Chamber
- / Digital PID Controller
- / Easy to set the Temperature by keypad
- / Auto Tuning Function for High Temperature Precision
- / Easy to Use
- / Water Bath with Internal and external Circulation Pump on.
- / Water Bath itself have function for Constant Temperature and Heat Exchanger



Standard Items

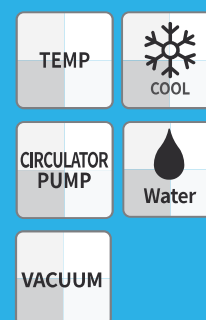
Main Body
Lid (SUS)
Power Cable
Manual

Low Temp. Water Bath	VS-310FW
Temp. Controller	Digital PID Controller
Temp. Range	-20°C to 99°C
Temp. Accuracy	±0.1°C at 37°C
Circulation Pump	25 Liter / Min
Dimension(in)	300 X 300 X 300 / 200(H)mm
(out)	530 X 370 X 780(H)mm
Capacity	27 Liter
Material(in)	Stainless Steel (SUS 304)
(out)	Steel Plate with Powder Coating
Lid	Stainless Steel (SUS 304)
Out Cork	External 1/4"
Compressor	Hermetically Sealed Type, 1/3HP
Power	220V, 1.3KW, 60Hz

Thermo-Vac Circulator

VS-310VC

- / For Water Bath, Circulator, Vacuum Function and etc
- / Suitable on Vacuum Centra Vac and Circulator



Standard Items

Main Body
Lid (SUS)
Aspirator
Power Cable
Manual

Thermo-Vac Circulator	VS-310VC
Aspiration	40 Liter / Min
Ultimate Vacuum	Max. 7mm Hg

※ VS-310VC: VS-310FW + High Quality Aspirator



GROWTH CHAMBER

05

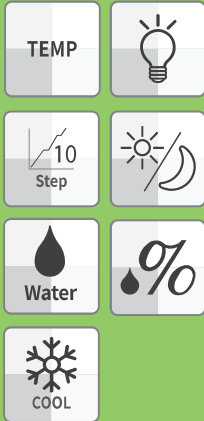
Vision Scientific

**GROWTH CHAMBER,
TEMPERATURE &
HUMIDITY CHAMBER**



Growth Chamber

VS-5GC



- / Available Various Condition setting for Temperature, Humidity and Lux
- / Available 10 Steps Programs
- / Light Bank Construction to be minimized the Radiant Heat's Effect
- / Trustworthy Safety Device
- / Adjustable about position and quantity of Light Bank(Option)
- / Touch Screen Controller (Option)
- / Recording Temperature by Chart Recorder(Option)
- / Available PC Link for Control and Monitoring(Option)

Standard Items

Main Body
Shelves
Metal Lamp
F.L Lamp
Lux Meter
Power Cable
Manual

Option



Touch Screen
Controller

5.7 Inch Color LCD



Chart Recorder

6 Point,
120mm Chart



Lux Meter

Movable Sensor
with Flexible Cable



PC Linker

RS-232 Interface



Application

- / For Plant Tissue Culture
- / For Genetic Study
- / For Culture of Animal, Bugs and etc
- / For Agricultural Chemicals Test
- / For Plant Accimatation
- / For Environmental Study

Growth Chamber

VS-5GC



Growth Chamber	VS-5GC-1300HL	VS-5GC-1300	VS-5GC-800	VS-5GC-600
Dimension (in)	1,400 × 800 × 1,200(H)mm	1,400 × 800(D) × 1,200(H)mm	800 × 800 × 1,200(H)mm	700 × 700 × 1,200(H)mm
(out)	1,800 × 1,090 × 2,300(H)mm	2,020 × 945(D) × 2,240(H)mm	1,420 × 945 × 2,240(H)mm	1,320 × 845 × 2,240(H)mm
Capacity	1344 Liter	1344 Liter	768 Liter	588 Liter
Light Bank	3 Side	Upper Side	Upper Side	Upper Side
Illuminance	50,000 Lux	23,000 Lux	15,000 Lux	15,000 Lux
Shelves	6 EA	6 EA	3 EA	3 EA
Power	220V, 8.6kW, 60Hz	220V, 5.7kW, 60Hz	220V, 5kW, 60Hz	220V, 4.5kW, 60Hz
Main controller	Microprocessor Programmable Controller			
Display	Alphanumeric 80 Character Back-Lit LCD Display			
Temp. Range	0°C to 60°C (Light ON : 10°C to 60°C)		※ Main Use Temp. 28°C~37°C	
Temp. Accuracy	±0.5°C at 25°C			
PID Auto Tuning	One Touch Auto Tuning			
Programmable	10 Step + 1 Manual Program			
Humidity Range	35% to 98% RH		※ Main Use Humidity 35~85%RH	
Humidity Accuracy	±1% at 70%			
Humidity Sensor	Electronic Device			
Humidifier	Evaporation by Motor with SUS 316 Pipe Heater			
Material (in)	Stainless Steel, SUS 304			
(out)	Steel Plate with Powder Coating			
(ceiling)	Vacuumed Triple Pair Glass			
Door	Silicone Packing Magnet Door with Window			
Cooling Device	Hermetically Sealed Compressor, Auto Exchange Dual Evaporator			
Safety Device	Over/under Temp. Protector, Water Level Monitor, Power Breaker			

※ Available Order made Product by Customer's Inquiry. Let us know the point as below in advance before order, please.

1. Volume 2. Temperature Range 3. Humidity Range 4. Lux 5. Wave of Light 6. Water Supply Type(Direct / Water Tank)...

Plant Growth Chamber

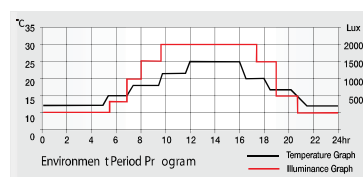
VS-5PGC-3S / VS-5PGC-4S

- / Microprocessor Control
- / Light Bank on Door , right and left side(-3S)(Max.23,000Lux)
- / Light Bank on Door, Upper, right and left side(-4S)(Max.35,000Lux)
- / 10 step programs for Temperature, Humidity and Lux Condition
- / Regular Lux condition are supplied on each shelves.
- / Light Bank Construction to be minimized the Radiant heat's effect
- / Trustworthy Safety Device

Plant Growth Chamber	VS-5PGC-3S	VS-5PGC-4S
Light Bank	3 Side Type	4 Side Type
Illuminance	Max. 23,000 Lux	Max. 35,000 Lux
Dimension (in)	500 × 500 × 1,200(H)mm	500 × 500 × 1,200(H)mm
(out)	700 × 800 × 2,000(H)mm	735 × 920 × 2,215(H)mm
Light	F.L. 40W × 15EA	F.L. 40W × 15EA, M.L. 250W × 1EA
Power	220V, 4.8KW, 60Hz	220V, 5.3KW, 60Hz
Capacity	300 Liter	
Main Controller	Microprocessor Programmable Controller	
Programmable	10 Step + 1 Manual Program	
Display	Alphanumeric 80 Character Back-lit LCD display	
Temp. Accuracy	±0.5°C at 37°C	
Temp. Range	0°C to 60°C (Light on : 10°C to 60°C)	※ Main Use Temp. 28°C ~37°C
Humidity Range	35 to 98% RH	※ Main Use Humidity. 35~85%RH
Humidity Accuracy	±1% at 70%	
Humidity Sensor	Electronic Device	
Humidifier	Evaporation by Motor with SUS 316 Pipe Heater	
Lux Meter	Movable Sensor with Flexible Cable	
Material (in)	Stainless Steel SUS 304	
(out)	Steel Plate with Powder Coating	
(side Wall)	Vacuumed Triple Pair Glass	
Shelves	3EA, Adjustable Type	
Door	Double Door, Silicone Packing Magnet Door	
Cooling Device	Hermetically Sealed Compressor, Auto Exchange Dual Evaporator	
Safety Device	Over / Under Temperature Protector, Water Level Monitor, Power Breaker	

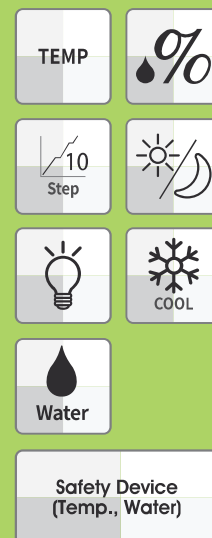
※ Available Order made Product by Customer's Inquiry. Let us know the point as below in advance before order, please.

1. Volume 2. Temperature Range 3. Humidity Range 4. Lux 5. Wave of Light 6. Water Supply Type(Direct / Water Tank),...



Environment Period Program
for VS-5PGC-3S

VS-5PGC-3S series can be set the Temperature, Humidity and Lux can be divided by Day and Night Mode. Multi-Purpose test can be available by 10 step Programs. Also, More detail timer can be set depends on condition. (For Dawn, Morning, A.M, Noon, Afternoon, Evening, Night, Mid-Night....)



Standard Items

Main Body
Shelves
Metal Lamp (VS-5PGC-4S)
F.L Lamp
Lux Meter
Power Cable
Manual

CO2 Growth Chamber

VS-5GC-1300C / VS-5PGC-3C

Co2 Growth chamber can be satisfied about Photosynthesis Necessary Condition by Co2 Measuring Device (InfraRed Sensor is installed on Growth Chamber)



CO2 Growth Chamber	VS-5GC-1300C	VS-5PGC-3C
Dimension (in)	1,400 × 800 × 1,200(H)mm	500 × 500 × 1,200(H)mm
(out)	2,020 × 945 × 2,240(H)mm	700 × 800 × 2,000(H)mm
Capacity	1,344 Liter	300 Liter
Light Bank	Upper Side	3 Side
Illuminance	23,000 Lux	23,000 Lux
Shelves	6EA	3EA
Power	220V, 5.7KW, 60Hz	220V, 4.8KW, 60Hz
Main controller	Microprocessor Programmable Controller	
Programmable	0°C to 60°C (Light on : 10°C to 60°C) ※ Main Use Temp. 28°C ~37°C	
Temp. Range	10 Step + 1 Manual Program	
Temp. Accuracy	±0.5°C at 37°C	
Humidity Range	35 to 98% RH ※ Main Use Humidity. 35~85%RH	
Humidity Accuracy	±1% at 70%	
CO2 Range	0 ~ 5,000ppm (Option : 0 ~ 12,000ppm)	
CO2 Sensor	Dual-Beam Non Dispersive Infra-red Sensor	
Material (in)	Stainless Steel SUS 304	
(out)	Steel Plate with Powder Coating	
Door	Silicone Packing Magnet Door with Window	
Safety Device	Over / under Temperature Protector, Water Level Monitor, Power Breaker	

Standard Items

Main Body
Shelves
Metal Lamp
F.L Lamp
Lux Meter
Power Cable
Manual

※ CO2 Growth Chamber : Growth Chamber(Standard) + CO2 Sensor and Co2 Controller.

※ Available Order made Product by Customer's Inquiry. Let us know the point as below in advance before order, please.

1. Volume 2. Temperature Range 3. Humidity Range 4. Lux 5. Wave of Light 6. Water Supply Type(Direct / Water Tank)....



[VS-5GC-1300C]



[VS-5PGC-3C]

Dew Chamber

VS-5DC

- / Suitable the Germination test of Plate has the root
- / Suitable the Plant test for Tissue culture, Growth and Germination
- / Suitable the test for waterproof and humidity incursion
- / Keeping full humidity condition
- / Strong Magnetic Pump
- / Digital PID Controller
- / Easy to set the Temperature by Key pad
- / Auto Tuning function for high Temperature Precision
- / Trustworthy Safety Device for Over Heating and Cooling
- / Available 10 step programmable mode(VS-5DC-P)(Option)

Dew Chamber	VS-5DC
Temp. Controller	Digital PID Controller
Temp. Range	15°C to 45°C
Temp. Accuracy	±0.5°C at 25°C
PID Setting	Auto Tuning
Display	LED Digital
Humidity Range	Up to 100% RH
Dimension (in)	1,400 × 750 × 1,500(H)mm
(out)	2,200 × 955 × 1,990(H)mm
Capacity	1,575 Liter
Material (in)	Stainless Steel, SUS 304
(out)	Steel Plate with Powder Coating
Door	Two Door, Silicone Packing Magnet Door
Shelves	6 EA
Circulation Pump	120W
Safety Device	Over / Under Temp. Protect or Water Level Monitor, Power Break er
Cooling Device	1/2 HP, Hermetically Compressor
Power	220V, 3.5KW, 60Hz

※ Available Order Made Product for user's Inquiry(Optional)
When over 98% humidity is used, Temperature must be over 25°C



Option



Touch Screen Controller
5.7 Inch Color LCD



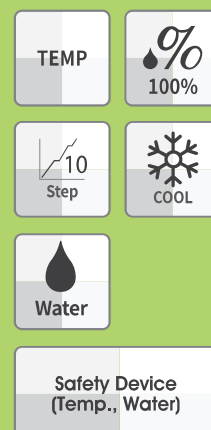
Programmable Control
10 Step Program



Chart Recorder
6 Point



Water Filter
WP-005

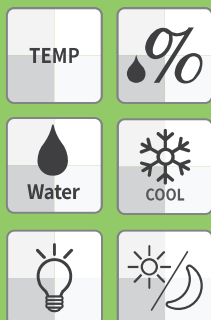


Standard items

Main Body
Shelves
Power Cable
Manual

Walk-In Growth Chamber

VS-5GC-W



- / Large capacity Chamber user can be in chamber and out
- / For Plant Tissue Culture
- / For Genetics Study
- / For Culture of Animal, Bigs and etc
- / For Agricultural Chemicals Test
- / For Plant Accimataion
- / For Environmental Study
- / Available LED Luminous Source and Optics

Standard Items

Main Body
Shelves
Metal Lamp
F.L Lamp
Lux Meter
Power Cable
Manual

Walk-In Growth Chamber	VS-5GC-W
Dimension (in)	2,000 × 1,400 × 1,800(H)mm
(out)	2,200 × 1,750 × 2,400(H)mm
Capacity	5040 Liter
Light Bank	Upper Side
Illuminance	35,000 Lux (Option : 50,000 Lux)
Shelves	None
Power	220V, 12KW, 60Hz
Main controller	Microprocessor Programmable Controller
Programmable	10 Step + 1 Manual Program
Display	Back-lit LCD Display
Temp. Range	0°C to 60°C (Light on : 10°C to 60°C)
Temp. Accuracy	±0.5°C at 25°C
PID Auto Tuning	One Touch Auto Tuning
Humidity Range	35% to 98% RH
Humidity Accuracy	± 1% at 70%
Humidity Sensor	Electronic Device
Humidifier	Evaporation by Motor with SUS 316 Pipe Heater
Material (in)	Stainless Steel SUS 304
(out)	Steel Plate with Powder Coating
(ceiling)	Vacuumed Triple Pair Glass
Door	Silicone Packing Magnet Door with Window
Cooling Device	Hermetically Sealed Compressor, Auto Exchange Dual Evaporator
Safety Device	Over/under Temp. Protector, Water Level Monitor, Power Breaker



Option



[Growth Stand]

Illuminated Growth Stand	VS-14S
Dimension	1,300(W) × 500(D) × 1,900(H)mm
Material	Stainless Steel
Illumination	Fluorescent Lamp 40W × 8EA
Shelves	5 (Illuminated Shelf 4)
Height of Stage	400mm
Controller	Photo-period Controller, 24hr

※Available Order made Product depends on size of stand, Quantity of Lamp, Number of shelves and others.

Temperature & Humidity Chamber

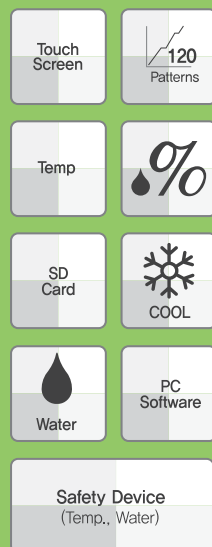
VS-5TH

- Programmable 5.7" Color Touch Screen
- Available Test for Constant Temperature on -40 ~ 150°C and Humidity on 25~95%
- Digital Recording Function for Temperature, Humidity and other parameters by SD memory card
- 120 Patterns, 1200 Segment Program
- Monitoring and Date Acquisition on real time
- Available free-PC software by RS232 Port
- Available Multi connection from 1 Personal Computer to 9 chambers by RS-485 Port(Optional)
- Available Efficient Operation and Maintenance.
- Easy to control type for Temperature and Humidity
- Inside chamber can be seen well even on low temperature by Anti-Fog Function and Heat Glass.
- LED Light, Reservoir Cassette and Accessport are equipped.

Trustworthy Safety device for Over heating and Over Currency.

Model		VS-5TH-150G	VS-5TH-180G	VS-5TH-350G	VS-5TH-800G	VS-5TH-1000G
Temperature Range		-20°C to 150°C				
Model		VS-5TH-150GL	VS-5TH-180GL	VS-5TH-350GL	VS-5TH-800GL	VS-5TH-1000GL
Capacity (Liter)		150	180	336	800	1,000
Dimensions	Inner (W x D x H, mm)	500 x 500 x 600	600 x 500 x 600	600 x 700 x 800	1,000 x 800 x 1,000	1,000 1,000 x 1,000
	Outer (W x D x H, mm)	1,000 x 1,020 x 1,600	1,100 x 1,020 x 1,600	1,100 x 1,220 x 1,850	1,500 x 1,320 x 1,600	1,500 x 1,520 x 2,150
Temperature	Range	-40°C to 150°C (Option) -60°C ~ 150°C				
	Stability	±0,1°C at Full Range				
	Uniforlity	±0,5°C at 40°C				
	Heating Time	From 25°C to 100°C Within 30Min.				
	Cooling Time	From 25°C to -20°C Within 50Min. / From 25°C to -40°C Within 100Min				
Humidity	Range	25 ~ 95% RH at 20 ~ 90°C				
	Stability	± 0,5% at 60% / 40°C				
	Uniforlity	± 3,0% at 60% / 40°C				
Controller	Display	Programmable Controller with 5,7 Inch LCD Color Touch Screen Interface				
	PC Interface	RS-232C Interface with Free PC Software				
	Programming	120 Patterns / 1200 Segments				
Shelves	Number of Standard / Max.	2/8		2/10	2/12	
	Load per shelf	25 Kg				
Material	Internal	Stainless Steel #304				
	Shelf	Stainless Steel #304				
	External	Epoxy Powder Coated Steel				
Working Condition	Temperature	18°C to 30°C (Recommend Temp. : 20°C)				
	Humidity	30 ~ 85%				
	Altitude	Less than 2000m				
Safety		Electrical Leakage Breaker, Over Temp, Cut-off, Low Water Level				
Electric Requirements		220V 또는 380V 3Phase, 60Hz				

※ Available Order made product as user's inquiry(Optional).



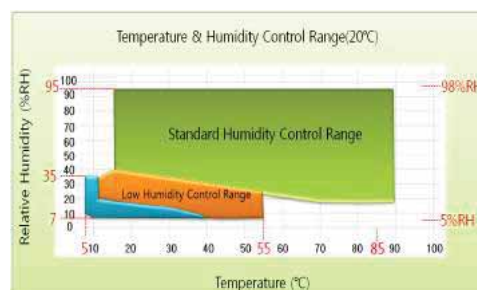
Standard Items

Main Body
Shelves
Power Cable
Manual

Option



Digital
Chart Recorder



Main Controller

- Color Touch Screen
- Recording function
- Data Graph



Thermal Shocking Test Chamber

VS-5TH-2Z / VS-5TH-3Z

- / From -65°C to 150°C are taken withing 10 Min.
- / Available Test for rapidly changing Temperature
- / Dependson use purpose, 2 Zone Elevation Type or 3 Zone Damper Type is selectable
- / Test Temperature can be arrived quickly by Strong Compressor
- / Trustworthy Safety Device in standard
- / Recorder is standard item
- / Selectable RS-232 port or USB Memory
- / Latest Cooling system
- / Low Noise (Less than60dB)
- / When Vibration Shock in test range is moved from Chamber on High Temperature to Chamber on Low Temperature, Occurred shock can be minimized, Temperature change time is reduced, Noise is minimized

Model	VS-5TH-2Z-27	VS-5TH-2Z-64	VS-5TH-2Z-125
Type	2 Zone (Lift Type)		
Model	VS-5TH-3Z-27	VS-5TH-3Z-64	VS-5TH-3Z-125
Type	3 Zone (Damper Type)		
Test Area Dimension	300 x 300 x 300	400 x 400 x 400	500 x 500 x 500
Capacity	27L	64Liter	125Liter
Temp. Range (Cooling Chamber)	-70°C to -10°C		
Temp. Range (Hot Chamber)	60°C to 180°C		
Shock Time (Recovery Time)	-40°C to 120°C within 5 minutes (±2°C)		
Controller	LCD Color Touch Screen Controller Included, Recordering function (SD card Slot)		
Refrigeration System	Cascade Refrigeration System		
Material	(In) SUS304		
	(Out) Powder Coated Steel Plate		
Safety Device	Phase Monitoring Relay, Over heat Protector for Compressor,		
	High & Low Pressure Switch, Motor Electric Over Load Relay,		
	Compressor Electric Over Load Relay,		
	Power Circuit Breaker(ELCB, NFB), Over Heat prtector for heaters		
Power	220VAC 3Ph or 380VAC 3Ph / 60Hz		

※ Accessories cable port Ø38mm or Ø50mm



3 Zone Damper Type



2 Zone Elevation Type



Ultra Pure Deionized Water System

VS-RO15 / VS-ROUP15

- ✓ Production of Type III or II grade water
- ✓ Easy to filter exchange
- ✓ Real time indication for Water quality (Conductivity)
- ✓ Auto water level control and Digital Display
- ✓ Low price and economic price
- ✓ Available on Life science, Cell culture, Tissue culture....

Product Water Quality

Resistivity	18.2MΩ-cm
Toc	<5ppb / <1ppb (Bolt in UV Lamp)
Particles @ 0.2μm	<1/ml
Endotoxin	<1eu/ml
Bacteria	<1cfu/ml
Silicate	<0.1ppb
Heavy Metal	<1ppb

Ultra Pure Deionized Water System	VS-RO15	VS-RO30	VS-RO50	VS-RO100	VS-RO200	VS-RO400	VS-RO600
Conductivity	0-2µs/cm (Type II Grade)						
Ultra Pure Deionized Water System	VS-ROUP15	VS-ROUP30	VS-ROUP50	VS-ROUP100	VS-ROUP200	VS-ROUP400	VS-ROUP600
Product Rate	Max 15L/hr	Max 30L/hr	Max 50L/hr	Max 100L/hr	Max 200L/hr	Max 400L/hr	Max 600L/hr
Conductivity	0-3µs/cm (Type I Grade)						
Resistivity	18.2MΩ-cm						
Display	Digital Display						
Controller	Microprocessor Type						
Option	UV Lamp / UF Filter / Pressure Controller			UV Lamp / UF Filter			
Dimension	300x500x520 (H) mm			600x500x1450 (H) mm			
Power	220V, 50/60Hz, 1 Phase						

※ Available Order Made Product as user's inquiry.

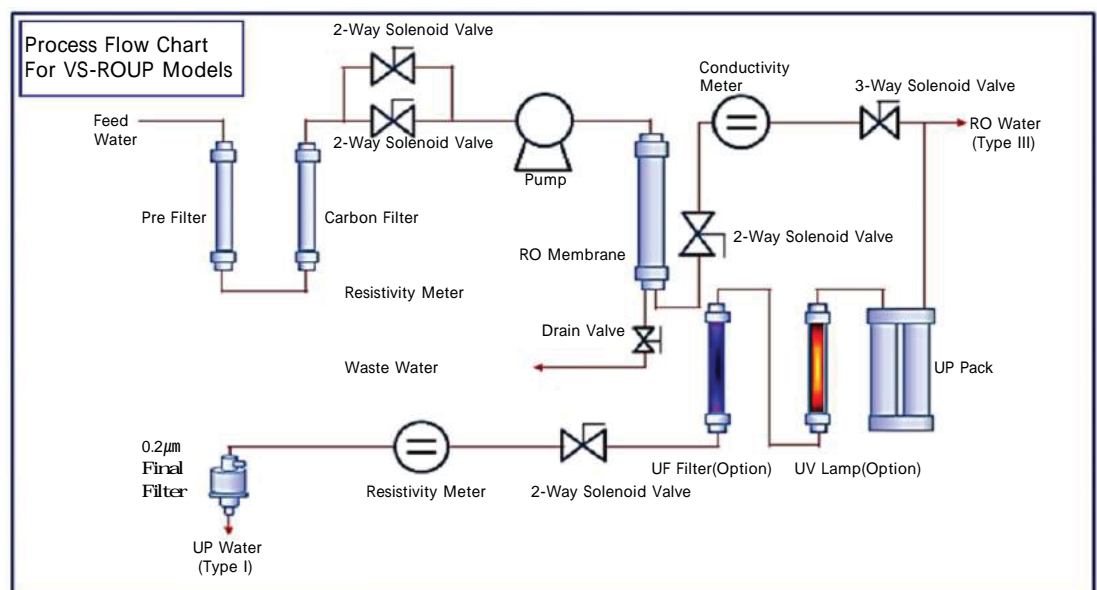
Specification can be changed for R&D improvement and better quality without prior notice

Standard Items

Main Body
Connecting Accessories
Power Cable
Manual

Pure & Ultra Water System is very practical equipment which is produced pure water or ultra pure water from tap water by water supply system or under water. These equipment make up a pure water by reverse osmosis system and ultra pure water by Ion-Filter. Below flowchart shows process how it makes

- HPLC, AAIC, BD Test
- Cell Culture, Tissue Culture
- PCR, Analysis
- Refined design
- Glassware washing, cleaning and etc...





DRYING OVEN

06

Vision Scientific

**DRYING OVEN,
STERILIZER**



Auto-Steam Sterilizer

VS-1321

- / LCD Microprocessor Control
- / Full Automatic Driving Program
- / 10 Step of Sterilization Program
- / Exhaust Speed Control(Medium, Instruments and Natural Cooling Mode)
- / Water tank and Level Sensor
- / Sterilization Reservation Function(Pre-Reservation)
- / Trustworthy Safety Device for Over Heating and Pressure
- / Self Checking Function
- / Automatic Reversion System for Power Failure

Auto-Steam Sterilizer	VS-1321-45	VS-1321-60	VS-1321-80	VS-1321-100
Capacity	45 Liter	60 Liter	80 Liter	100 Liter
Dimension (in)	Dia, 300 × 650mm	Dia, 350 × 630mm	Dia, 400 × 630mm	Dia, 450 × 630mm
(out)	620 × 470 × 860(H)mm	625 × 595 × 1,075(H)mm	785 × 755 × 1,245(H)mm	785 × 810 × 1,245(H)mm
Heater	2,25KW	2,4KW	3,4KW	4KW
Weight	90kg	95kg	132kg	144kg
Power	220V, 60Hz	220V, 60Hz	220V, 60Hz	220V, 60Hz
Temp. Controller	Microprocessor Controller			
Temp. Range	Ambient to 130°C (Run : 121°C)			
Temp. Accuracy	± 1°C			
Operating Pressure	1,0 to 2,0kg/cm ²			
Display	Back Light LCD 20 Character Display			
Program	10 Program			
Timer	Electronic Type, 0 ~ 60min.			
Appointment	Pre-appointment Function			
Pressure Gauge	0 ~ 3kg/cm ²			
Air Vent Selection	Automatic Selectable			
Air Vent Type	3Type / Fast, Slow & No Vent			
Safety Device	Over Heat / Over Pressure Protector, Water Level Monitor			
Monitor Unit	Audible & Visible Device			
Basket	Standard Type, 2EA			

※ Available Order made product as user's inquiry(Optional).



Option



Chart Recorder
6 Point, 120mm
Chart



Standard Items

Main Body
Baskets
Power Cable
Manual

Auto-Steam Sterilizer

VS-4045ST



Standard Items

Main Body
Baskets
Power Cable
Manual

- / Suitable use on General Laboratory
- / Strong design
- / Heating, Exhaust, Sterilization, Drain and End are Working Automatically
- / Adjustable Pressure Drain Speed
- / Manual Exhaust Valve
- / Trustworthy safety Device for Over heating and Pressure
- / Precision Electronic Timer
- / 2 Stainless Basket in Standard items
- / Water tank and Level Sensor
- / 4 kinds of Capacity
- / Available Order Made Product upto 200Liter Capacity

Auto-Steam Sterilizer	VS-4045ST	VS-4060ST	VS-4080ST	VS-4100ST
Capacity	45 Liter	60 Liter	80 Liter	100 Liter
Dimension (in)	Dia. 300 × 650mm	Dia. 350 × 650mm	Dia. 400 × 650mm	Dia. 450 × 650mm
(out)	600 × 550 × 1,070(H)mm	600 × 550 × 1,070(H)mm	670 × 620 × 1,110(H)mm	670 × 620 × 1,110(H)mm
Heater	2KW	3KW	4KW	4KW
Weight	73kg	81kg	122kg	128kg
Power	220V, 60Hz	220V, 60Hz	220V, 60Hz	220V, 60Hz
Temp. Controller	Digital PID Controller			
Temp. Range	Ambient to 130°C (Run : 121°C)			
Temp. Accuracy	± 0.5°C			
Operating Pressure	1.0 to 1.2kg/cm ²			
Timer	99Hr 59Min			
Pressure Gauge	0 ~ 3kg/cm ²			
Air Exhaust	Adjustable Valve			
Safety Device	Over Heat Protector, Over Pressure Protector			
Monitor Unit	Audible & Visible Device			
Basket	Standard Type, 2EA			

※ Available Order made product as user's inquiry (Option).



Option



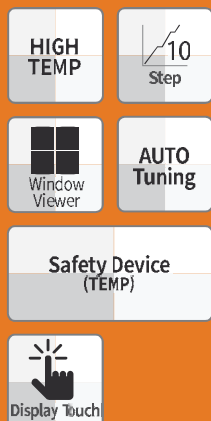
Chart Recorder
6 Point, 120mm
Chart



Drying Oven

VS-4172D / VS-4150ND

- / For Drying, Sterilization and Test for High Temperature
- / Digital PID Controller
- / Auto-tuning Function
- / Trustworthy Safety Device
- / Easy to use
- / Window Viewer for checking inside Chamber
- / Forced Air Circulation Type with High Precision(VS-4172D)
- / Natural Convection type for Powder drying(VS-4150ND)
- / 10step Programmable Controller(Option, '-P' Model)



Standard Items

Main body
Shelves
Power Cable
Manual

Drying Oven	VS-4172D	VS-4048D	VS-4028D	VS-4150ND
Type	Mechanical Convection	Mechanical Convection	Mechanical Convection	Natural Convection
Temp. Range	Ambient +5℃ to 220℃	Ambient +5℃ to 220℃	Ambient +5℃ to 220℃	Ambient +5℃ to 200℃
Temp. Accuracy	±1℃ at 150℃	±1℃ at 150℃	±1℃ at 150℃	±2℃ at 150℃
Circulation Fan	20W Blower Fan	20W Blower Fan	6W Blower Fan	None
Dimension (in)	550 × 520 × 600(H)mm	380 × 310 × 410(H)mm	410 × 295 × 230(H)mm	500 × 500 × 600(H)mm
(out)	710 × 670 × 940(H)mm	540 × 565 × 710(H)mm	590 × 480 × 490(H)mm	685 × 650 × 1,000(H)mm
Capacity	172 Liter	48 Liter	28 Liter	150 Liter
Shelves	3EA, SUS Wire Type	2EA, SUS Wire Type	2EA, SUS Wire Type	3EA, SUS Wire Type
Weight	73kg	65kg	60kg	70kg
Power	220V, 1.6KW, 60Hz	220V, 1.3KW, 60Hz	220V, 1KW, 60Hz	220V, 1KW, 60Hz
Temp. Control	Digital PID Controller			
PID Setting	Auto Tuning			
Display	LED Display			
Material (in)	Stainless Steel			
(out)	Steel Plate with Powder Coating			
Door	Silicone Packing Door with Window			

Program Model	Model Name + '-P'
Temp. Controller	10 Step Programmable Control

※ '-P' Model : Main Body + 10 Step Programmable Control



Mechanical Convection Drying Oven

VS-4300D / VS-4585D2

- / For Drying ,Sterilization and Test for High Temperature
- / Large Capacity Drying Oven
- / Digital PID Controller
- / Trustworthy Safety Device
- / Easy to Use
- / Window Viewer for checking inside Chamber
- / Forced Air Circulation Type with High Precision
- / 10step Programmable Controller(Option, '-P' Model)
- / Distribution chart of Temperature by hozontal damper type of AIR Circulation(VS-4585D2)
- / Saving Space Against Volume (VS-4585D2)
- / Available Order made product for 300°C, 400°C and 500°C(Option)
Ex) VS-4300D For 300°C [VS-4300DHT-300]

Mechanical Convection Drying Oven	VS-4300D	VS-4585D2 (Damper Type)
Dimension (in)	600 × 500 × 1,000(H)mm	1,200 × 750 × 1,300(H)mm
(out)	760 × 690 × 1,555(H)mm	1,650 × 920 × 1,780(H)mm
Capacity	300 Liter	1170 Liter
Shelves	4EA, SUS304 Plate	16EA, SUS304 Plate
Power	220V, 2KW, 60Hz	220V, 4.4KW, 60Hz
Temp. Accuracy	±1°C at 150°C	±2°C at 150°C
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient +5°C to 220°C	
PID Setting	Auto Tuning Function	
Display	LED Display	
Circulation Fan	Sirocco Fan Motor	
Material (in)	Stainless Steel	
(out)	Steel Plate with Powder Coating	
Door	Silicone Packing Door with Window	
Safety Device	Exclusive over Temp. Protector, Power Breaker	

	VS-4300DP	VS-4585D2P
Temp. Controller	10 Step Programmable Controller	

※ -P Model : Standard items + 10 Step Program (Option, '-P' Model)

Option



Chart Recorder
120mm, 6pin



Touch Screen Controller
5.7 Inch Color LCD



VS-4585D2



VS-4300D

HIGH TEMP

10 Step

Window Viewer

AUTO Tuning

Safety Device (TEMP)

Display LED

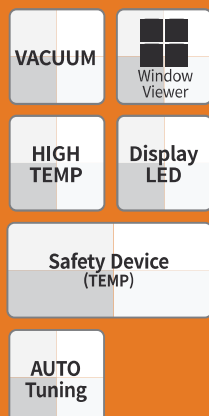
Standard Items

Main Body
Shelves
Power Cable
Manual

Vacuum Oven

VS-4027V / VS-4064V

- / For Moisture Dry, Concentration, Exhausting , Solvent removement and etc
- / Front Glass Door for checking inside
- / Digital PID Controller
- / Auto Tuning
- / Trustworthy Safety Device
- / Easy to Use
- / Available Connection of N2 Gas into the Purge Valve of unit(Option)



Standard Items

Main body
Shelves
Power Cable
Manual

Vacuum Oven	VS-4027V	VS-4064V
Dimension (in)	300 × 300 × 300(H)mm	400 × 400 × 400(H)mm
(out)	500 × 450 × 700(H)mm	600 × 550 × 800(H)mm
Capacity	27 Liter	64 Liter
Power	220V, 800W, 60Hz	220V, 1200W, 60Hz
Weight	50kg	75kg
Temp. Range	Ambient +5°C to 200°C (※ Using over 600 at least is recommended.)	
Temp. Controller	Digital PID Controller	
PID Setting	Auto-tuning	
Display	LED Display	
Material (in)	Stainless Steel	
(out)	Steel Plate with Powder Coating	
Valve	Vacuum Valve, Purge Valve	
Vacuum Gauge	Mechanical Type	
Door	Silicone Packing Door with Large Window	
Shelves	AL material, 2EA	
Safety Device	Exclusive Over Temp. Protector, Power Breaker	

Option

Vacuum Pump



W2V20

Cold Trap



VS-250T



Guide for Drying Oven Selection



VS-4027V / VS-4064V



VS-4150D / VS-4172D



VS-4300D



VS-4585D2

	VS-1202V5/V6	VS-4150ND	VS-4172D / VS-4300D	VS-4585D2
Type	Vacuum Oven	Natural Convection Oven	Forced Circulation type Oven	Horizontal Air Current type Oven
Use Purpose	Material dry on Vacuum	For Powder dry (No Blower Fan)	For Material(Medicine, Medium, Glass ware and etc) dry by Blower Fan	
TEMP. Range	Ambient +5°C ~ 200°C		Ambient +5°C ~ 220°C(Option:300°C, 400°C 500°C)	
Precision	+1°C at 150°C			+2°C at 150°C
Window Viewer	Standard Items			
Air Circulation Type	4 side Heating	Natural Air Convection	4 side Air Circulation	Horizontal Dampper
Display	LED Display			
Capacity	27L / 64L	150L	172L / 300L	1,170L
Program	N/A	-P Model(10Step Program for Temperature) [Option]		

* Depends on User's Inquiry, order made product are available

UV Sterilizer

VS-905M / VS-905L



- ✓ UV Sterilization and Dry progress at once
- ✓ Glass Door for Checking inside chamber
- ✓ Glass Door with Ultra Violet Protection threat
- ✓ Digital PID Controller
- ✓ Easy to set the Temperature by Key pad
- ✓ Auto Tuning Function for High Temperature Precision.
- ✓ Trustworthy Safety Device for Over Heating
- ✓ Easy to use
- ✓ High Temperature Distribution by Forced AIR Circulation
- ✓ 10step Programmable Controller (Option)

Standard Items

Main body
Shelves
Power Cable
Manual

UV Sterilizer	VS-905M	VS-905L
Dimension (in)	600 x 500 x 1,000(H) mm	800 x 600 x 1,000(H) mm
(out)	750 x 680 x 1,460(H) mm	960 x 780 x 1,460(H) mm
Capacity	300 Liter	480 Liter
Power	220V, 1.3KW, 60Hz	220V, 1.7KW, 60Hz
Temp. Range	Ambient + 5°C to 120°C	
Temp. Controller	Digital PID controller	
PID Setting	Auto-tuning function	
Display	LED display	
Circulation Fan	Sirocco Fan Motor	
Material (in)	Stainless steel	
(out)	Steel Plate with Powder Coating	
Door	Safety Pair Glass	
Shelves	5EA	
Safety Device	Exclusive over temp, protector, Power Breaker	



Option



Programmable Control
10 Step Program
40 character Black-lit LCD



Chart Recorder
120mm, 6Pin



UV Lamp
254mm

Clean Air Oven

VS-906NT

- / Asepsis and Non-Particle dry by HEPA Filter
- / Digital PID Controller
- / Auto Tuning Function for High Temperature Precision
- / Window Viewer for checking inside chamber
- / Mechanical Convection Type
- / Selectable Clean Air Oven for Low Temperature(80°C) and High Temperature(200°C)
- / 10step Programmable Controller (Option)

Clean Air Oven	VS-906NT-360	VS-906NT-800
Dimension (in)	600 × 600 × 1,000(H)mm	1,200 × 600 × 1,100(H)mm
(out)	970 × 850 × 1,820(H)mm	1,670 × 850 × 1,920(H)mm
Capacity	360 Liter	792 Liter
Shelves	3EA	6EA
Power	220V, 3.3KW, 60Hz	220V, 3.5KW, 60Hz
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient +5°C to 80°C	
Filter	HEPA Filter	
Circulation Fan	Sirocco Fan Motor	
Material (in)	Stainless Steel	
(out)	Steel Plate with Powder Coating	
Door	Silicone Packing Magnet Door with Window	
Safety Device	Exclusive over Temp. Protector, Power Breaker	

Clean Air Oven	VS-906HT-360	VS-906NT-800
Temp. Range	Ambient +5°C to 200°C	

※ For Max.200°C model

Option



Programmable Controller

10 Step Program
40 character Black-lit LCD



Chart Recorder

120mm, 6Pin



Standard Items

Main Body
Shelves
HEPA Filter
Power Cable
Manual

Explosive Proof Oven

VS-430EPO / VS-4120EPO



- / Suitable the Temperature test for Explosion, Fire and Harmful Material
- / Order Made Product depends on Stability Test, Constant Temperature Test, Heat Change Test, Endurable Test
- / Independent Working Safety Device
- / Trustworthy Safety for Over Heating
- / Separated Outdoor Fan and Control Box Type(Option)
- / Available Separated Circulator (Option)

Standard Items

Main body
Shelves
Signal Tower Lamp
Power Cable
Manual

Explosive Proof Oven	VS-430EPO	VS-4120EPO
Dimension (in)	600 × 500 × 1,000(H)mm	1200 × 700 × 1,400(H)mm
(out)	800 × 850 × 1,500(H)mm	1500 × 850 × 1,750(H)mm
Capacity	300 Liter	1176 Liter
Shelves	4EA, SUS 304 Plate	8EA, SUS 304 Plate
Power	220V, 1.3KW, 60Hz	220V, 2.4KW, 60Hz
Temp. Controller	Digital PID Controller	
Temp. Range	Ambient +5°C to 200°C	
Temp. Accuracy	±0.3°C at 40°C	
Material (in)	Stainless Steel SUS 304	
(out)	Steel Plate with Powder Coating	
Door	Silicone Packing Door (Option: window viewer)	
Safety Device	Exclusive over Temp. Protector, Power Breaker	
	Hydraulic Temp. Controller	
	Audible & Visible Monitor	

Option



Touch Screen Controller
5.7 Inch Color LCD



Chart Recorder
120mm, 6Pin



Aging Chamber

VS-415QAC

- / For Silicon Harden is included a lot of Particle
- / Large Capacity Drying Oven
- / Digital PID Controller
- / Easy to use
- / Window Viewer for checking inside chamber
- / Horizontal Damper Type with high temperature precision
- / Light Bar for checking status easily
- / Trustworthy Safety Device for Temperature
- / Data Device(Paperless Recorder)
- / Available Low Temperature or High Temperature Test by using Fan
- / Duct Installation(Option)

TEMP	AUTO Tuning
4 ROOMS	Program
Safety Device(TEMP)	
Damper Type	

Aging Chamber	VS-415QAC
Temp. Controller	Color Touch Screen Programmable Controller
Temp. Range	Ambient +20°C to 250°C
Temp. Accuracy	±0.1°C at 150°C
Dimension (in)	1,000 × 700 × 1,200(H)mm × 4 Chamber
Capacity	150 Liter × 4 Chamber / Total 600 Liter
Material (in)	Stainless Steel
(out)	Steel Plate with Powder Coating
Door	Silicone Packing Door with Window
Circulation Fan	Sirocco Type 1/2HP x 2EA
Shelves	3EA / Chamber, Stainless Plate
Safety device	Exclusive Over Temp, Protector, Emergency Stop S/W, ELCB
Power	220V or 380V 3Ph, 9Kw, 60Hz
Signal Tower Lamp	3 Color Tower lamp
Ventilation Duct	Ø75mm SUS (Damper 포함) 각 챔버 1개씩 (Option)

※ Available Order made product as user's inquiry(Option)

Option



Touch Screen Controller



Chart Recorder
120mm, 6Pin





CLEAN BENCH

07

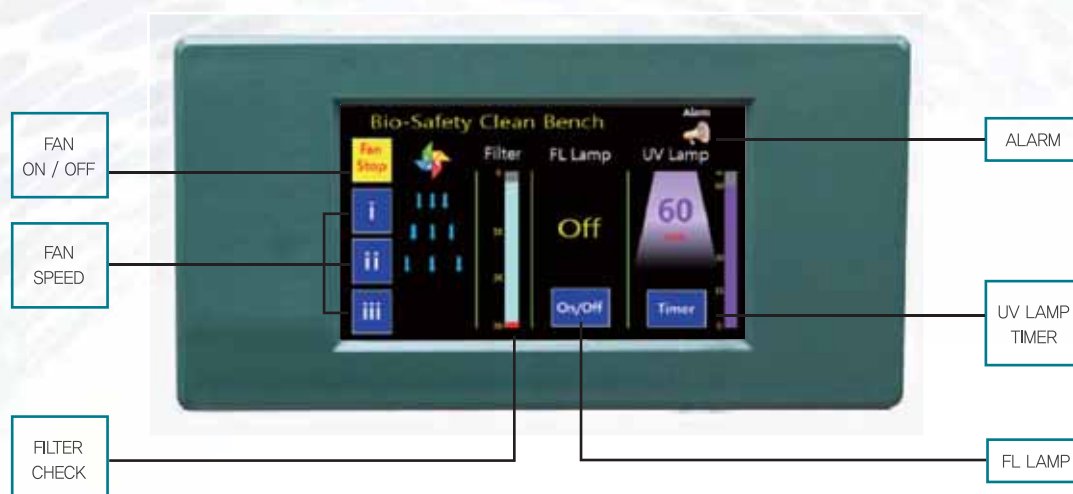
Vision Scientific

CLEAN BENCH

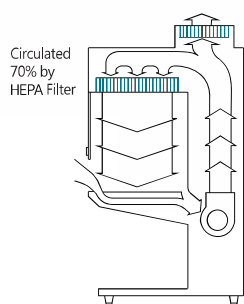


▪ Control Panel Layout

All Color Touch Screen Controller can be checked about the Status well and Easy to control



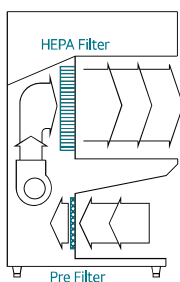
▪ Clean Bench type



Bio Hazard Safety Cabinet

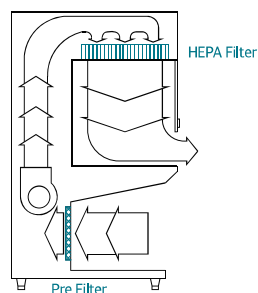
VS-161BS, VS-141LS, VS-7120BS

Exhausted 30%
by HEPA Filter



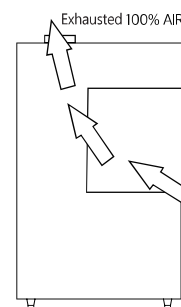
Laminar Flow Clean Bench
(Horizontal Type)

VS-7120LH



Laminar Flow Clean Bench
(Vertical Type)

VS-7120LV



Fume Hood

VS-8120H Series

Option

SUCTION MASTER

Vacuum Device for Culturing



Suction	VS-97SM
Vaccum	680mmHg
Speed	45Lite/min
Trap	3 Liter
Operation	Foot touch & Manual
Dimention	510X310X350(H)mm
Weight	15kg
Power	220V, 180W, 60Hz

Bio-Hazard Safety Cabinet

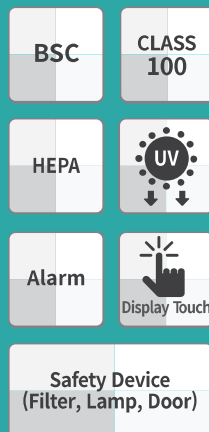
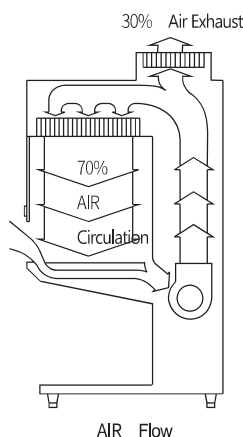
VS-7120BS

- / Microprocessor Controller
- / Easy to check working status by Controller is located on right-upper side on the unit
- / High efficient Filter and Low Vibration & Noise Construction
- / Removable Working Table for easy cleaning
- / Alarm is working when glass door is opened over open limit
- / Drain Valve dropped test material can be out
- / Selectable position of Valve(Right or Left side)
- / Available Canopy Connection(Optional)
- / Trustworthy Safety Device for Door opening, UV Lamp and F.L Lamp

Bio-Hazard Safety Cabinet	VS-7120BS
Type	Bio-Hazard Safety Type
Main Controller	Microprocessor Control with All Color Touch Screen
Winding Velocity	0.3 – 0.5m / sec
Velocity control	3 stage
Purity	Lower than Class 100
Main Filter	HEPA filter/0.3 micron 99.97% efficiency
Pre Filter Size	900 X 200 X 20 (H)mm
HEPA Filter (Small) Size	300 X 300 X 75 (H)mm
HEPA Filter (Large) Size	1,240 X 540 X 75 (H)mm
Working table	Easy removable plate
Dimension (in)	1,200 X 620 X 710 (H)mm
(out)	1,320 X 790 X 1,920 (H)mm
Material (in)	Working table : Stainless steel SUS304
(out)	Cabinet : Steel plate with powder coating
Illumination	30W Fluorescent Lamp x 2EA
UV Lamp	30W X 2EA
UV Timer	15, 30, 60min, Hold
Utility	Outlet, Gas faucet, Vacuum faucet, Hour meter
Door	Sliding Glass Door, Tempered Safety Glass
Safety system	Door Limit Alarm
Power	220V, 480W, 60Hz

Bio-Hazard Safety Cabinet	VS-7090BS	VS-7180BS
Type	Bio-Hazard Safety Type	Bio-Hazard Safety Type
Pre Filter Size	540 X 200 X 20 (H)mm	1,500 X 200 X 20 (H)mm
HEPA Filter (Small) Size	300 X 300 X 75 (H)mm	300 X 300 X 75 (H)mm x 2 set
HEPA Filter (Large) Size	880 X 540 X 75 (H)mm	1,840 X 540 X 75 (H)mm
Dimension (in)	840 X 620 X 710 (H)mm	1,800 X 620 X 710 (H)mm
(out)	960 X 790 X 1,920 (H)mm	1,920 X 790 X 1,920 (H)mm
Power	220V, 500W, 60Hz	220V, 660W, 60Hz

※ VS-7090BS is for 1 person, VS-7120BS is for 2 People, VS-7180BS is for 3 Peoples.
All Function of VS-7090BS and VS-7180BS are same with VS-7120BS except dimension.



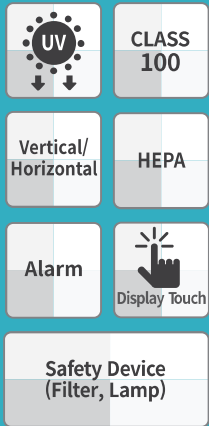
Standard Items

Main Body
HEPA Filter
UV Lamp
F.L Lamp
Power Cable
Manual

Laminar Flow Clean Bench

VS-7120LV / VS-7120LH

- / Microprocessor Controller
- / All Color Touch Screen can be checked about status and easy to control
- / High Efficiency Filter and Low Vibration and Low Noise
- / Removable Working Table for easy cleaning
- / Built in Inflow Pre-Filter for long life of HEPA
- / VS-7120LV - Vertical air flow
- / VS-7120LH - Horizontal air flow
- / Trustworthy Safety Device for Door opening, UV Lamp and F.L Lamp



Option

Main Body
HEPA Filter
Pre Filter
UV Lamp
F.L Lamp
Power Cable
Manual

Laminar Flow Clean Bench	VS-7120LV
Type	Vertical Air flow Type
Main Controller	Microprocessor Control with All Color Touch Screen
Winding Velocity	0.3 – 0.5m/sec
Velocity controller	3 stage
Purity	Lower than Class 100
Main Filter	HEPA filter/ 0.3 micron 99.97% efficiency
Pre Filter Size	600 X 400 X 20 (H)mm
HEPA Filter Size	1,240 X 540 X 75 (H)mm
Dimension (in)	1,200 X 620 X 710 (H)mm
(out)	1,320 X 790 X 1,920 (H)mm
Material (in)	Working table : Stainless steel SUS304
(out)	Cabinet: Steel plate with powder coating
Illumination	30W Fluorescent Lamp x 2EA
UV Lamp	30W X 2EA
UV Timer	15, 30, 60min, Hold
Utility	Outlet, Gas faucet, Vacuum faucet, Hour meter
Door	Sliding Glass door, Tempered Safety Glass
Power	220V, 480W, 60Hz

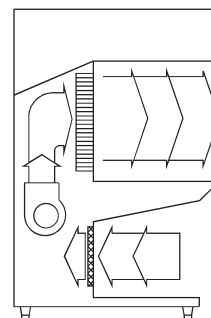
Laminar Flow Clean Bench	VS-7090LV	VS-7180LV
Type	Vertical Air flow Type	Vertical Air flow Type
Pre Filter Size	600 X 400 X 20 (H)mm	600 X 400 X 20 (H)mm
HEPA Filter (Large) Size	880 X 540 X 75 (H)mm	1,840 X 540 X 75 (H)mm
Dimension (in)	840 X 620 X 710 (H)mm	1,800 X 620 X 710 (H)mm
(Out)	960 X 790 X 1,900 (H)mm	1,920 X 790 X 1,920 (H)mm
Power	220V, 500W, 60Hz	220V, 660W, 60Hz

※ VS-7090LV is for 1 person, VS-7120LV is for 2People, VS-7180LV is for 3People.
All Function of VS-7090LV and VS-7180LV are same with VS-7120LV except dimension.

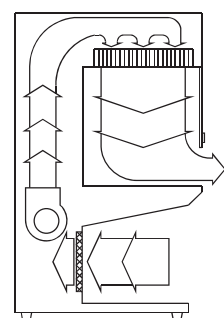


Laminar Flow Clean Bench	VS-7120LH
Type	Horizontal Air flow Type
Dimension (in)	1,200 X 600 X 700 (H)mm
(Out)	1,360 X 870 X 1,900 (H)mm
Power	220V, 480W, 60Hz

※ VS-7120LH is for Horizontal air flow type.
Other specification are same with VS-7120LV.



Horizontal



Vertical

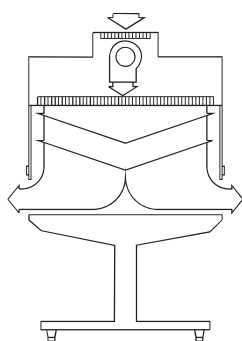
Process Clean Bench

VS-7120PC / VS-7120PS

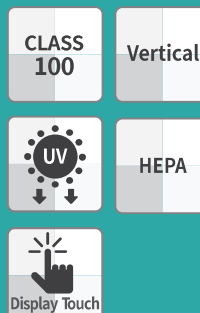
- / Process Type of Clean bench more 2 user can work in face each
- / For Large capacity work, Continual work for Large volume and etc
- / High Efficient Filter and Low Vibration & Low Noise Construction
- / Inflow Pre-Filter for Long life of Filter
- / Vertical air flow Type has easy Construction with High efficiency
- / Recirculation Exhaust Type worker is protected
- / Trustworthy Safety Device for Door opening, UV Lamp and F.L Lamp

Process Clean Bench	VS-7120PC
Type	Process / Vertical Flow Type
Main Controller	Microprocessor Control with All Color Touch Screen
Winding Velocity	0.3 - 0.5m/sec
Velocity control	3 stage
Purity	Lower than Class 100
Display	Back Light LCD Digital display
Main Filter	HEPA filter/ 0.3 micron 99.97% efficiency
HEPA Filter (Small) Size	300 X 300 X 75 (H)mm
HEPA Filter (Large) Size	1,240 X 540 X 75 (H)mm
Dimension (in)	1,200 X 620 X 710 (H)mm
(out)	1,320 X 790 X 1,920 (H)mm
Material (in)	Working table : Stainless steel SUS304
(out)	Cabinet: Steel plate with powder coating
Illumination	30W Fluorescent Lamp x 2EA
UVG Lamp	30W X 2EA
UV Timer	15, 30, 60 min, Hold
Utility	Outlet, Gas faucet, Vacuum faucet, Hour meter
Door	Sliding Glass door, Tempered Safety Glass
Power	220V, 480W, 60Hz

Process Clean Bench	VS-7120PS
Type	Recirculation Exhaust Type
Dimension (in)	1,200 X 620 X 710 (H)mm
(out)	1,320 X 790 X 1,920 (H)mm
Power	220V, 660W, 60Hz



AIR FLOW



Standard Items

Main Body
HEPA Filter
UV Lamp
F.L Lamp
Power Cable
Manual

Bio Hazard Safety Cabinet

YACOS65 SAFZONE

- Microprocessor Controller
- Class II A2 Type of Bio Hazard Safety Cabinet
- Humann Machine Interface Controller
(Selectable one Controller of Membrane and 7 Inch Touch Screen)
- Easy to replace ISO Class 4 Grade High Efficiency Filter
- Double-Wall Structure surrounded with negative pressure to fully prevent leakage of contaminated air in the event of damage to the cabinet external walls.
- The negative plenum pressure of the cabinet in the unit of mmAq
- Easy access and maintenance for the service personnel
- Night-idle Mode 30% motor speed output only
- Trustworthy Safety device for Door, UV lamp and etc
- Available Anti-Bacterial stainless model (VIRO-CUT™)(Option)
- Moveable Elbow rest, IV Bar and Exterior Canopy (Option)

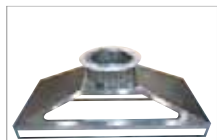
Option



IV Bar/ Hanging Basket



Movable Elbow/Arm Rest



Exterior Canopy



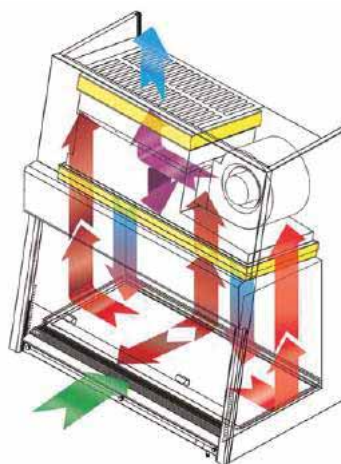
Brake Casters



Service Valve
(Gas, Air, Vacuum)



VIRO-CUT™
(Anti-Bacterial Stainless)



SAFZONE®
BIOSAFETY CABINET



BSC	CLASS II A2
NIGHT IDLE Mode	ANTI- BACTERIA
HEPA	UV
Alarm	Display Touch
Safety Device (Filter, Lamp, Door)	

Standard Items

Main Body
HEPA Filter
UV Lamp
F.L. Lamp
Power Cable
Manual



[Membrane Controller]



[Touch Screen Controller]

Feature

7 Inch HMI Color Touch Screen

Advanced Human Machine Interface (HMI) Touch Screen mounted on SAFZONE® BSCs to provide user with a better graphic view for easy operation and function settings and continuous displays the cabinet's performance.

- High resolution LCD display visualizes operating, monitoring and efficient control in real time.
- The large 7 inch full color touch screen enables intuitive parameter entry and displays variable data, including trend graphs and alarm elements.
- User-friendly visual icons quickly creates users an "easy-to-navigate" to make operation more efficient.
- Display real time clock and date, inflow, downflow, negative plenum pressure, HEPA filter running hrs, UV lamp running hrs at the front page.
- Main functions include:
 - Automatic Pre-purge / Post-purge
 - Built-in timer for counting up and down, UV light
 - Safety interlock for window and UV light to protect the operator from UV irradiation
 - Audible and visual text alarms for the following abnormal situations:
 - High / Low inflow velocity
 - High / Low downflow velocity
 - Wrong window operation height
 - High negative plenum pressure
 - Usage time of HEPA filter exceeds the setting hour
 - Usage time of UV lamp exceeds the setting hour
 - Operation records including Inflow, Downflow and Pressure
 - Multi-language display setting
 - Two kind of unit display settings for air velocity and pressure



Membrane Controller



Membrane Switches are easy to use.
Built-in UV light timer for 0~99 minutes / hours and negative plenum pressure gauge.
Safety interlock device controls blower, fluorescent light and UV light on/off by window sash open and closed.

VIRO-CUT™ Antibacterial Stainless Steel



SAFZONE® VIRO-CUT™ Antibacterial Stainless Steel is the first industry application on Biosafety Cabinet products. It is used as the liners and work surface for the work area of SAFZONE Biosafety Cabinets.

JIS Z 2801 testing standard is performed to evaluate the antibacterial effectiveness of VIRO-CUT™ Stainless Steel.

JIS Z 2801 is one of the most commonly requested life-related processed products in the world, quick and reliable antibacterial surface tests for antibacterial activity and efficacy JIS Z 2801 standards measure the growth that may occur after a material is inoculated by two common bacteria, Escherichia coli and Staphylococcus aureus for 24 hours.

VIRO-CUT™ Stainless Steel is a SUS#304 alloy with antibacterial element, which is evenly distributed from the surface to the inside of the steel. This results in efficient contact cleaning for the exposure of bacteria to stainless steel surfaces.



Patented Quick-Access HEPA Filter Replacement System

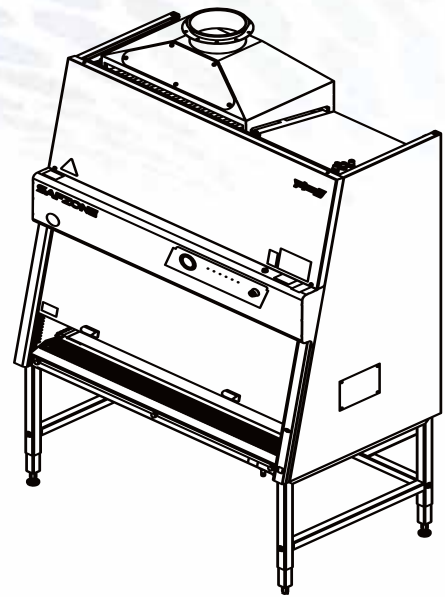
SAFZONE® patented innovative HEPA filter replacement system enables the filter changing safely, time-saving and manpower-saving. Without any tools, the filters can be replaced from the front side of the cabinet more easily and quickly than other brands.

The Class H14 (per EN1822) Supply and Exhaust HEPA filters are used on SAFZONE® BSCs. The HEPA filters consist of a continuous sheet of glass fibers pleated and mounted in a rigid aluminum frame (Aluminum extruded frame can increase strength and rigidity for corrosion resistance). With minimum 99.99% efficiency for 0.3 micrometers particulates (MPPS, the Most Penetrating Particle Size) creates a clean, sterile environment for operation zone and workplace. The efficiency will be more than 99.99% for particulates greater or smaller than 0.3 micrometers.

QUALITY & PERFORMANCE GUARANTEE

A Factory Testing Report will be enclosed with each SAFZONE® Biosafety Cabinet. The following performance and safety tests being conducted before leaving the factory.

- | | |
|-------------------------------|------------------------------|
| ■ Pressure decay test | ■ Lighting intensity test |
| ■ HEPA filter leak test | ■ Vibration test |
| ■ Inflow velocity test | ■ Noise level test |
| ■ Downflow velocity test | ■ UV lighting intensity test |
| ■ Airflow smoke patterns test | ■ Electrical safety test |



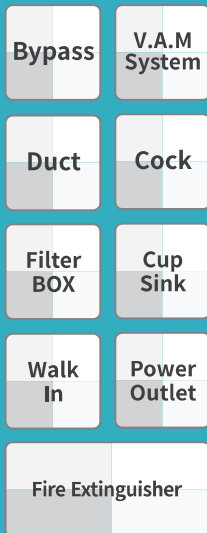
SAFZONE® BIOSAFETY CABINET

Model	3 Feet	4 Feet	5 Feet	6Feet
International Certification	• EN 12469	NSF 49 (25cm)	EN 12469	EN 12469
	• ISO 9001:2015	EN 12469	ISO 9001:2015	ISO 9001:2015
		ISO 9001:2015	0,3 – 0,5m/sec	0,3 – 0,5m/sec
External Dimensions W x D x H (without Support Stand 660mm)	1034x789x1537mm	1344x789x1537mm	1634x789x1537mm	1934x789x1537mm
Internal Dimensions W x D x H	920x626x709mm	1220x626x709mm	1520x626x709mm	1820x626x709mm
Cabinet Main Construction	<ul style="list-style-type: none"> Working area : Stainless Steel #304 (Option : Viro-cut stainless steel, SUS#316) External construction : Cold-rolled steel with powder coating finish 			
Air Flow	70% re-circulated / 30% exhausted			
Window Operation Height	20cm, 25cm			
Avg. Inflow Velocity	0,51 m/s			
Avg. Downflow Velocity	0,325 m/s	0,30 m/s	0,30 m/s	0,30 m/s
Exhaust Air Volume	9m³/min (20cm)	11 m³/min (20cm)	14m³/min (20cm)	17m³/min (20cm)
	10m³/min (25cm)	13m³/min (25cm)	16m³/min (25cm)	19m³/min (25cm)
Supply/Exhaust HEPA Filter	99,99% @0,3 micron (Class H14)			
Light Intensity	> 1,000 lux			
Sound Level	< 55dBA (20cm)	< 57dBA (20cm)	< 59dBA (20cm)	< 61dBA (20cm)
	< 58dBA (25cm)	< 63dBA (25cm)	< 60dBA (25cm)	< 62dBA (25cm)
UV Lamp	254 nm/FL 20Wx1	254 nm/FL 30Wx1	254 nm/FL 40Wx1	254 nm/FL 20Wx2
Fluorescent Lamp	T5/21Wx2	T5/28Wx2	T5/35Wx2	T5/21Wx4
Window Glass	6mm temperd glass			
Electrical Outlets	North America (UL Listed), Europe/World wide (CE Certified)			
Optional Accessories	• IV bar with 6 hooks / hanging basket			
	• Service valves (air, gas, Vacuum), CSA Certified			
	• Exhaust canopy			
	• Braket casters			
	• Moveable elbow / arm rest			
Room Height Suggested	227cm at least			
Power Consumption	115V/15A	185W (20cm)	230W (20cm)	380W (20cm)
	230V/10A	220W (25cm)	300W (25cm)	400W (25cm)
	100V/15A			490W (25cm)
Net Weight	210 kg	240 kg	280 kg	320 kg

Fume Hood

VS-8120H

- / Exhaust for Dangerous and Harmful Gas
- / Built in Cup Sink, Gas, Water, Power Outlet
- / Available internal Blower Fan on Place Duct can not be installed
- / Upper table material can be selected depends on use purpose(Option)
- / Available Order made Product for size and others(Option)
- / Available Installation of Filter, Exterior Duct, and blower fan (Option)
- / Fire Extinguisher System(Option)
- / Velocity AIR Monitor(Option)



Fume Hood		Air Volume & Stable Pressure			
VS-8120H	1,200 x 800 x 2,350(H)mm	1/2 HP	2200m³/h (25mmAq)	1HP	3180m³/h (30mmAq)
VS-8150H	1,500 x 800 x 2,350(H)mm				
VS-8180H	1,800 x 800 x 2,350(H)mm				
VS-8210H	2,100 x 800 x 2,350(H)mm				
VS-8240H	2,400 x 800 x 2,350(H)mm				
Outlet	220V Socket x 2	OPTION) 			
Cock	Water x 1, Gas x 1, Air x 1				
Valve	Water x 1, Gas x 1, Air x 1				
Work Top	Phenolic Laminate				
	Sliding Tempered Glass Door				
Material (in)	Chemical Stable Cemboard	[HEPA Filter] 0.3 Micron 99.7% efficiency			
(out)	Steel with Powder Coating				
(sub frame)	40 x 40 Sq Pipe 1.5mm Welding				
Material	Epoxy Powder Coating				
	storage door) Particle Board				
Lamp	Explosion proof Light 30W	** Depends on condition user want, filter size, shape, efficiency can be different			
Switch	Fan, F.L. Lamp				
Power	220V 60Hz				



Standard Items

Main body
F.L Lamp
Table/ drain
Power Cable
Manual

Option



Internal Blower
Fan Motor(1/2HP)
Option) 1HP



Velocity AIR
Monitoring
(V.A.M)



External Blower
Fan motor



Fire Extinguisher
System



Exterior Filter Box



* Fire Extinguisher System

- Early Suppression of fire by Short and, Over heat
- Prevention of Electric Circuit by early suppression
- Fast Recovery
- Prevention of Additional damage by Extinguisher system in building

* Before order, discuss about specification and environmental condition enough, please.

Gross Workstation

VS-8411GW-R / VS-8411GW-D

- / For Removal of Formaldehyde
- / Strong Stainless Steel working table and Frame
- / Hands Free Faucet
- / Water Jet Nozzle
- / 4 F.L Lamp for High working efficiency
- / Recirculation Type : Gas removal by Filter
- / Duct Type : Gas Exhaust outside by Duct
- / UV Light for High efficiency sterilization(Option)

Gross Workstation	VS-8411GW-R	VS-8411GW-D
Type	Recirculation Type	Duct Type
Filtering System	Pre Filter	Pre Filter
	Triple Filtering Unit	
Dimension	1,600 × 800 × 1,950(H)mm	
Illumination	F.L. 40W × 4 sets	
Water Supply	Built-in Hot & Cold Water, Shower Faucet	
Jet Water	10 Nozzle for Working Table	
Working Table	Stainless Steel, Mounted Sink	
Blower	1/2 HP, Sirocco Fan	
Utility	Service Outlet, Recorder Jack, Pedal Jack	
Standard Accessory	Working Tray(2), Filtering Net, Sink Stopper	
Power	220V, 60Hz	



Anaerobic Workstation

VS-5600A

Anaerobic Culture

N₂ / MIX GAS Vacuum

Pass Box ARM PORT

Pressure Air Lock

Safety Device (Temp, Vacuum)

Standard Items

Main Body
Internal Incubator
Petri Dish Plate Rack
Catalyst pack
Drilite pack
Glove
F.L Lamp
Manometer
Vacuum pump
Power Cable
Manual

- / Anaerobic Bacteriology
- / Offering the best condition for Culture of Anaerobic Microorganism
- / O₂ volume in chamber is kept on less 1%
- / Sample condition are set automatically before sample is came into the Chamber by Air Lock Pass Box
- / Less Gas Consumption
- / Built in Natural Air Flow Incubator(Standard)
- / Available Glove-free Type (Option)

Anaerobic Workstation	VS-5600A
Dimension (in)	1,000 × 700 × 750(H)mm
(out)	1,445 × 720 × 1,445(H)mm
Air Lock	300 × 300 × 300(H)mm
Control	Programmable Logic Control Manual Control
Pressure Control	Automatic
Method	Positive Pressure, Hydrogen & Catalyst
Light Bank	F.L. 20W × 2EA
Standard Device	Vacuum Pump, Glove, Catalyst Pack, Drilite Pack, Vacuum Gauge, Manometer, Shelf, Incubator, Petri Plate Rack
Power	220V, 1.1KW, 60Hz

※ Recommendable Gas Rate (MIX GAS : H₂ 5%, CO₂ 5%, N₂ 90% / N₂ GAS : 99%)

Hydrogen
Positive Pressure
Active Catalyst



VS-5600A ACCESSORY

/ Internal Incubator(Natural Convection type)

Natural Air Convection type Incubator with high temperature precision

Internal Incubator	5600 – 01
Temp. Control	Digital PID Controller
Temp. Range	Ambient + 5°C to 70°C
Temp. Accuracy	±0.2°C at 37°C
Display	LED Display
Door	2 Door

Optional Accessory	
Internal Incubator	5600-01
Petri Dish Plate Rack	5600-05
Mixed Gas	5600-11
N2 Gas	5600-12
Mixed Regulator	5600-06
N2 Regulator	5600-07
Gas Analyzer	BNK-2014AL
Catalyst Pack	5600-21
Drillite Pack	5600-22
Anaerobic Indicator	5600-23
Leak Detector	5600-30
Glove	5600-92
Sleeve	5600-94



5600-05 Petri Dish Plate Rack



VS-5600A Anaerobic Workstation

High Pressure Cell Crusher

VS-4600P

- / Crush of cell by high pressure
- / There is no heat on Cell sample
- / Cell is not mixed with others (No Pollution)
- / Available small sized cell with high efficiency
- / Only Cell wall is crushed
- / Application

- Enzyme preparation and isolation
- Cell extract preparation
- Bacterial and plant tissue disintegration
- Recovery of intercellular protein and nucleic acid
- Preparation of viral antigens for EIA test kits
- Disruption of bacillus spores and vegetative cell for pigment analysis
- Analytical fractionation of epithelial cells
- Disruption of food material for recovery of Micro-Organisms

Standard Items

Lab press / VS-4600P
Cell VS-004CL
Power Cable
Manual

High pressure cell	VS-4600P
Type	Hydraulic Motor drive
Max. Pressure	1,655 bar
Operation	Down & Up handle
Motor	1.5Kw
Dimension	490 X 820 X 1,650(H)mm
Weight	260 Kg
Power	380V, 1.5 KW, 3 Phase

Cell	VS-040CL	VS-004CL
Dio meter (out)	76 mm	60 mm
(in)	25 mm	9.5 mm
Height (close)	240 mm	160 mm
(open)	315mm	210 mm
Max. Capacity	40 ml	4ml
Max. Pressure	24,000 psi	20,340 psi

※ VS-004CL for 4ml cell is standard item. VS-040CL for 40ml is optional item.



Cell, 4ml, VS-004CL



Cell, 40ml, VS-040CL



REFRIGERATOR

08

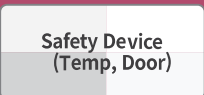
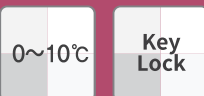
Vision Scientific

**REFRIGERATOR,
LAB FREEZER**



Cold Lab Chamber

VS-1302MS / VS-1302S / VS-1302L



Standard Items

Main body
Key Lock
Shelves
Power Cable
Manual

Option



Thermal Recorder
V320

- / General Laboratory Refrigerator for Low Temperature test
- / Special Pair Glass Door without Dew
- / Temperature Controller for High Precision(0.1°C Unit Control)
- / Security Key Lock and Waterproof F.L Lamp for checking inside chamber
- / Thermal Recorder for monitoring of inside chamber(V320, Option)
- / Forced AIR Circulation Type for high Precision Uniformity
- / Urethan Insulation for keeping low temperature
- / Adjustable Wire Shelves
- / Independent safety Device for Over Heating and Cooling
- / Optional Items : Access Hole, Outlet and others

Cold Lab Chamber	VS-1302MS	VS-1302S	VS-1302L
Dimension (in)	580 x 670 x 795(H)mm	620 x 690 x 1,430(H)mm	1,140 x 690 x 1,430(H)mm
(out)	715 x 800 x 1,375(H)mm	740 x 800 x 2,020(H)mm	1,257 x 800 x 2,020(H)mm
Capacity	308Liter	612Liter	1125Liter
Shelves	3EA	4EA	8EA
Door	Tempered Safety Glass 1 Door	Tempered Safety Glass 1 Door	Tempered Safety Glass 2 Door
Weight	149Kg	141Kg	178Kg
Power	220V, 500W, 60Hz	220V, 680W, 60Hz	220V, 720W, 60Hz
Temp. Range	0~10°C		
Temp. Controller	Digital P.I.D Controller		
Temp. Accuracy	±2°C at 5°C		
Illumination	LED Light		
Display	Dual LED Display		
Recorder	Thermal Recorder (Option)		
Defrost Device	Automatic Type		
Material (in)	Stainless steel		
(out)	Steel with Powder coating, Stainless		
Safety Device	Exclusive High & Low Temp. Protector		

※ This unit is not for Medical equipment. It is only for Laboratory.



VS-1302MS



VS-1302S



VS-1302L

Medicine Refrigerator (For Medical Equipment)

VS-1302MMR3 / VS-1302SMR / VS-1302LMR

- / Keeping Medicine, Pharmaceutical and others on Low Temperature and Quality Management
- / Special Pair Glass Door without Dew
- / Temperature Controller for High Precision(0.1°C Unit Control)
- / Security Key Lock and Waterproof F.L Lamp for checking inside chamber
- / Thermal recorder for monitoring of inside chamber(V320, Standard item)
- / Forced AIR Circulation Type for high Precision Uniformity
- / Adjustable wire Shelves
- / Urethane Insulation for keeping low temperature
- / Independent Safety Device for Over Heating and Cooling
- / Optional Items : Access Hole, Outlet

Medicine Refrigerator	VS-1302MMR3	VS-1302SMR	VS-1302LMR
Dimension (in)	580 x 670 x 795(H)mm	620 x 690 x 1,430(H)mm	1,140 x 690 x 1,430(H)mm
(out)	715 x 800 x 1,375(H)mm	740 x 800 x 2,020(H)mm	1,257 x 800 x 2,020(H)mm
Capacity	308Liter	612Liter	1125Liter
Shelves	3EA	4EA	8EA
Door	Tempered Safety Glass 1 Door	Tempered Safety Glass 1 Door	Tempered Safety Glass 2 Door
Weight	149Kg	141Kg	178Kg
Power	220V, 500W, 60Hz	220V, 650W, 60Hz	220V, 750W, 60Hz
Temp. Range	0~10°C		
Temp. Controller	Digital P.I.D Controller		
Temp. Accuracy	±2°C at 5°C		
Illumination	LED Light		
Display	Dual LED Display		
Recorder	Thermal Recorder		
Defrost Device	Automatic Type		
Material (in)	Stainless steel		
(out)	Steel with Powder coating		
Safety Device	Exclusive High & Low Temp. Protector		



VS-1302MMR3



VS-1302SMR



VS-1302LMR

0~10°C

Medicine

Thermal Recorder

Dual LED

Key Lock

Glass Door

Safety Device (Temp, Door)

Alarm

Standard Items

Main Body
Thermal Recorder(V320)
Key Lock
Shelves
Power Cable
Manual



Thermal Recorder
V320

Blood Bank Refrigerator

VS-1302MBR2 / VS-1302SBR / VS-1302LBR

- / Keeping Blood Bag, Medicine, Pharmaceutical and others on Low Temperature and Quality Management
- / Special Pair Glass Door without Dew / Easy to Keep the test sample on Drawer
- / Temperature Controller for High Precision(0.1°C Unit Control)
- / Security Key Lock and Waterproof F.L Lamp for checking inside chamber
- / Thermal recorder for monitoring of inside chamber(V320, Standard item)
- / Forced AIR Circulation Type for high Precision Uniformity
- / Adjustable wire Shelves
- / Urethane Insulation for keeping low temperature
- / Independent Safety Device for Over Heating and Cooling
- / Optional Items : Access Hole, Outlet

Blood Bank Refrigerator	VS-1302MBR2	VS-1302SBR	VS-1302LBR
Dimension (in)	510 x 525 x 650(H)mm	620 x 690x1,430(H)mm	1,140 x 690 x 1,430(H)mm
(out)	900 x 700 x 740(H)mm	740 x 800 x 2,020(H)mm	1,257 x 800 x 2,020(H)mm
Capacity	174Liter	612Liter	1,125Liter
Door	Solid Door (SUS304) / Tempered Safety Glass (Option)	Tempered Safety Glass	
Drawers	1 Door	1 Door	2 Door
Drawers	2EA	6EA	12EA
Illumination	N / A	LED Light	LED Light
Weight	78Kg	172Kg	218Kg
Power	220V, 260W, 60Hz	220V, 680W, 60Hz	220V, 720W, 60Hz
Temp. Range	0~10°C		
Temp. Controller	Digital P.I.D Controller		
Temp. Accuracy	±2°C at 4°C		
Display	Dual LED Display		
Recorder	Thermal Recorder		
Material (in)	Stainless steel		
(out)	Steel with Powder coating, Stainless		
Safety Device	Exclusive High & Low Temp. Protector		

Standard Items

Main Body
Thermal Recorder(V320)
Key Lock
Drawer
Power Cable
Manual



Thermal Recorder
V320



Stainless Drawer
435 X 534 X 95(H)mm



VS-1302MBR2

VS-1302SBR

VS-1302LBR

Pharmaceutical Refrigerator(For Medical Equipment)

VS-1302SPR / VS-1302LPR

- / Keeping Medicine, Pharmaceutical and others on Low and High Temperature and Quality Management
 - / Special Pair Glass Door without Dew
 - / Temperature Controller for High Precision(0.1°C Unit Control)
 - / Security Key Lock and Waterproof F.L Lamp for checking inside chamber
 - / Thermal recorder for monitoring of inside chamber(V320, Standard item)
 - / Forced AIR Circulation Type for high Precision Uniformity
 - / Adjustable wire Shelves
 - / Urethane Insulation for keeping low temperature
 - / Independent Safety Device for Over Heating and Cooling
- Optional Items : Access Hole, Outlet

Pharmaceutical Refrigerator	VS- 1302SPR	VS-1302LPR
Dimension (in)	620 x 690 x 1,430 (H)mm	1,140 x 690 x 1,430 (H)mm
(out)	740 x 800 x 2,020 (H)mm	1,257 x 800 x 2,020 (H)mm
Door	One Door, Tempered Safety Glass	Two Door, Tempered Safety Glass
Capacity	612Liter	1,125 Liter
Shelves	4 EA	8 EA
Weight	142Kg	178Kg
Power	220V, 680W, 60Hz	220V, 720W, 60Hz
Temp. Range	0 – 40°C	
Temp. Controller	Digital P.I.D Controller	
Temp. Accuracy	± 3°C at 37°C	
Display	Dual LED Display	
Recorder	Thermal Recorder	
Defrost device	Automatic type	
Material (in)	Stainless steel	
(out)	Steel plate with powder coating	
Illumination	Water Proof F.L 40W X 1ea	
Safety Device	Exclusive High & Low Temp. Protector	



VS-1302SPR



VS-1302LPR

0~40°C

Pharmaceutical

Glass
Door

Thermal
Recorder

Safety Device
(Temp, Door)

Key
Lock

Standard Items

Main Body
Thermal Recorder
Key Lock
Shelves
Manual



Thermal Recorder
V320

High Temperature Control Refrigerator

For Test Material, Medicine, Pharmaceutical, Blood Bag and others



Dual LED Display

Uniform Temperature Control

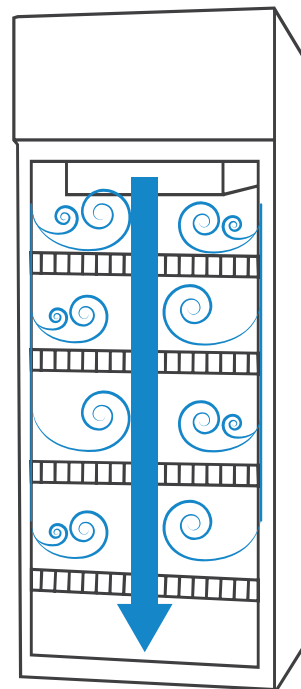
Cooling air is circulated in whole chamber from upper to lower by Dual Blower Fan. It makes high uniformity in chamber. Automatic Defrost System can be kept inside Temperature evenly

Precision Temperature Control

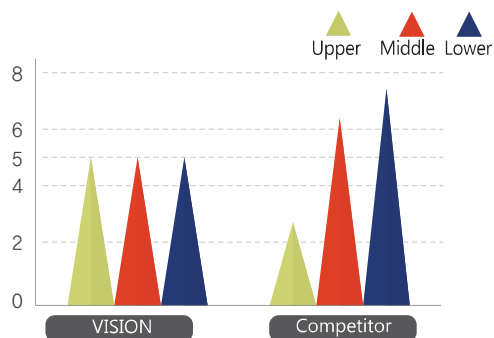
Temperature Sensor is checked about inside Temperature, Precision Temperature Control is possible by PID Controller.

High Trustworthy

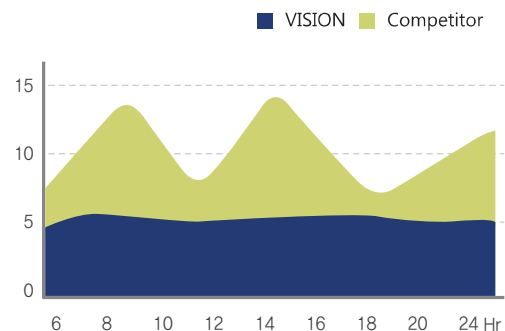
Tempered Pair Glass can be checked about Status in Chamber well. If some error for Temperature are occurred on the unit, Causes are checked by Dual safety device for High and low Temperature Limit. User can check and treat the problem immediately. Status report is printed out immediately by thermal recorder, user can check about Temp.change, Power Failure, Door open, and other changes immediately.



Temperature Distribution and Precision



[TEMP. Distribution on 5°C in Chamber]



[TEMP. Precision on 5°C in Chamber]

■ Service for Medical Refrigerator(Optional)

Wired·Wireless Alarm Service

When Emergency condition are occurred, it is not only printed out by Thermal Recorder, but also it is noticed to user by wire or wireless method..

If Temp.error is occurred, safety device for Low and High TEMP.Limit are checked about this problem first.Lamp is on with Alarm and status is printed out by thermal recorder.
If error is occurred on the unit, problem status can be called or sent some text messages to user immediately.

※ Depends on communication condition on user site, service possibility can be different.
Discuss us about service condition enough in advance, please.



Validation Service

The best Validation Service can be offered for High TEMP. Precision and quality

Installation Qualification Plan (IQ Plan)

Installation Qualification Report (IQ Report)

Operation Qualification Plan (OQ Plan)

Operation Qualification Report (OQ Report)



Calibration Service

Available Calibration service and Test report or Calibration report for the unit.
(This Service can be changed depednds on local condition)

Optional Accessories



[Thermal Recorder]



[Chart Recorder]



[7days Recorder]

Deep Freezer (Upright Type)

VS-90DF-534U

- Cryopreservation for long time by excellent cooling capacity (Max -90℃)
- Inovative Dual Compressor System
- Differentiated design for Double Door and Heater
- Inner Double Door is minimized heat loss
- Prevention of dew on inner door's surface
- Equip of Block Condenser without Pin
- Various Rack Style
- Ergonomic Door Locker System

Standard items

Main Body
Shelves
Power Cable
Manual

Deep Freezer		VS-90DF-376U	VS-90DF-534U	VS-90DF-692U	VS-90DF-702U
Cooling System		Dual Compressor System			
TEMP	Range	-90℃ ~ -60℃ at room temperature of 30℃ and humidity of 70%			
	Sensor	PT100 Sensor			
Compressor		Hermetic Type			
Condensor Type		Block Condenser, No Pin, Filter Free Mechanism			
Refrigerant		HFC (CFC Free Refrigerant System)			
Controller		Digital PID Controller			
Shelves		Included 3 Stainless Steel Shelves			
Max. number of racks		12pcs of 20(4x5)- Placed Rack (RFU20SD/RFU20SA)	16pcs of 20(4x5)- Placed Rack (RFU20SD/RFU20SA)	20pcs of 20(4x5)- Placed Rack (RFU20SD/RFU20SA)	20pcs of 20(4x5)- Placed Rack (RFU20SD/RFU20SA)
Capacity		376L	534L	692L	702L
Material	In	Stainless Steel (#304)			
	Out	Powder Coated Steel Plate			
	Inner Door	ABS + Polyethylene (Polyurethane insulator)			
Dimension	In (mm)	430×640×1,370	610×640×1,370	790×640×1,370	790×650×1,370
	Out (mm)	670×910×1,900	850×910×1,999	1,030×910×1,999	1,030×910×1,999
Consumption Power		1.65Kw	1.65kw	1.98kw	1.98kw
Main Power		220V~, 50Hz, 7.5A	220V~, 50Hz, 7.5A	220V~, 50Hz, 9.0A	220V~, 50Hz, 9.0A
Net Weight		250kg	330kg	410kg	410kg



Option

Rack Box



7Days Chart Recorder



Rack



Model	RFU20SD(Ⓐ)	RFU20SA(Ⓑ)
Available Box No.	20EA(4x5)	20EA(4x5)
Dimension	140x550x290(H)mm	140x550x290(H)mm
Rack Type	Sliding Drawer	Side Access
Material	Stainless Steel	Stainless Steel

Deep Freezer (Chest Type)

VS-90DF-210C

- Cryopreservation for long time by excellent cooling capacity (Max -90℃)
- Innovative Dual Compressor System
- Differentiated design for Double Door and Heater
- Inner Double Door is minimized heat loss
- Prevention of dew on inner door's surface
- Equip of Block Condenser without Pin
- Various Rack Style
- Ergonomic Door Locker System

Standard items

Main Body
Power Cable
Manual

Deep Freezer		VS-90DF-147C	VS-90DF-210C	VS-90DF-300C
Cooling System		Dual Compressor System		
TEMP	Range	-90℃ ~ -60℃ at room temperature of 30℃ and humidity of 70℃		
	Sensor	PT100 Sensor		
Compressor		Hermetic Type		
Condensor Type		Block Condenser, No Pin, Filter Free Mechanism		
Refrigerant		HFC (CFC Free Refrigerant System)		
Controller		Digital PID Controller		
Shelves		Included 3 Stainless Steel Shelves		
Max. number of racks		5pcs of 10(1x10)- Placed Rack (RFC10SA)	10pcs of 10(1x10)- Placed Rack (RFC10SA)	14pcs of 10(1x10)- Placed Rack (RFC10SA)
Capacity		147L	210L	300L
Material	In	Powder Coated Steel Plate		
	Out	Powder Coated Steel Plate		
	Inner Door	ABS + Polyethylene (Polyurethane insulator)		
Dimension	In (mm)	550×450×592	800×450×592	1,100×450×592
	Out (mm)	1,100×650×900	1,350×650×900	1,650×650×900
Consumption Power		1.3Kw	1.45Kw	1.45Kw
Main Power		220V~, 50Hz, 5.9A	220V~, 50Hz, 6.6A	220V~, 50Hz, 6.6A
Net Weight		103kg	145kg	173kg

Option

7Days Chart Recorder



Rack Box



Rack



Model	RFC10SA
Available Box No.	10EA(1x10)
Dimension	140x550x290(H)mm
Rack Type	Sliding Drawer
Material	Stainless Steel



Dual Compressor System

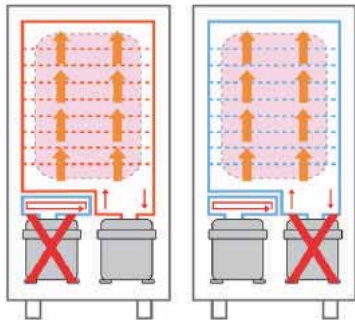
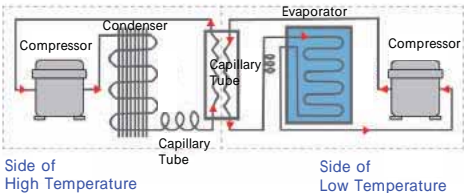
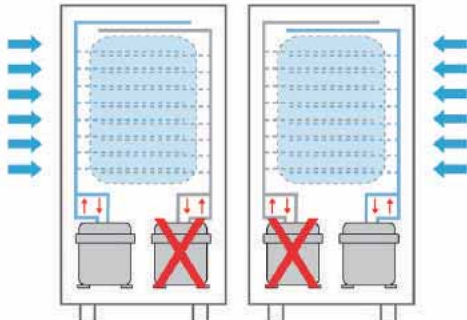
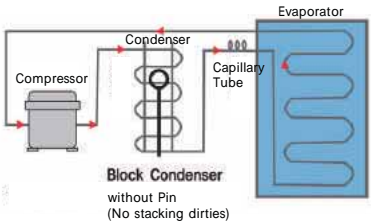
Double performance and Stability

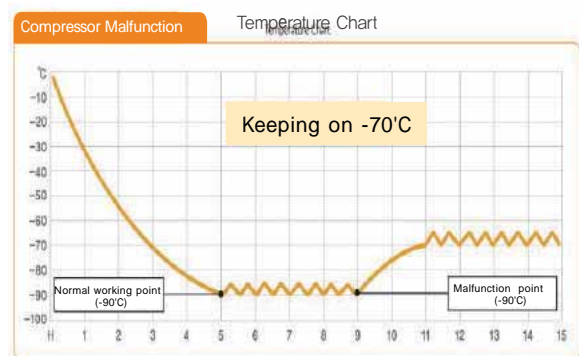
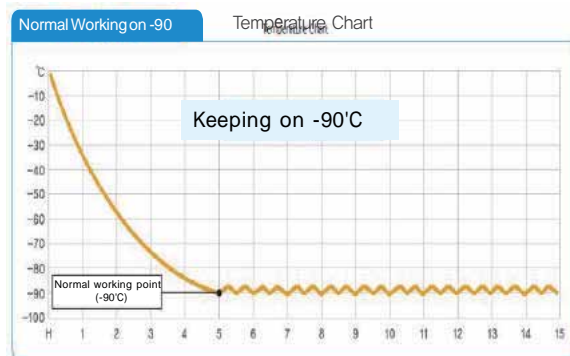
“ Deep freezer can be worked upto -90'C by Independent Dual Compressor System.

If there are some problem on a Compressor of Dual compressor, it can not be kept on -70'C continually.

Also it has a excellent backup function ”

Comparison table

Other Companies	VISION SCIENTIFIC
<p>If there is broken only one compressor of 2 compressors, inside temperature is raising.</p>   <p>Cascaded Compressor System</p> <ul style="list-style-type: none"> • Structure is complicated with loud noisy and frequent breakdown • If there are some problem on only a compressor of 2 compressors, whole cooling system are shut down. 	<p>Even though one compressor of 2 compressors is broken, inside temperature is kept on -70'C continually by Independent Cooling System.</p>   <p>Dual Compressor System</p> <ul style="list-style-type: none"> • Structure is simple with high efficiency, low noisy and No break down • Temperature is reached on -70'C by another one compressor



Small Deep Freezer

VS-90DF

- Long-Term Cryopreservation by excellent cooling capacity
- Direct cooling type of Small Deep freezer
- Vent-Port for solution of negative pressure occurrence
- Inner Double Door is minimized heat loss
- Prevention of dew on inner door's surface
- Equip of Block Condenser without Pin and filter
- Various Rack Style
- Ergonomic Door Lock System



Small Deep Freezer		VS-90DF-35U	VS-90DF-74C
Cooling System		Direct Cooling System	
TEMP	Range	-80℃ ~ 60℃	
	Sensor	PT100 Sensor	
Compressor / Condenser Type		Hermetic Type / Block Condenser (No Pin, Filter Free Mechanism)	
Refrigerant		HFC (CFC Free Refrigerant System)	
Capacity		36L	74L
Controller		Digital PID Controller	
Shelf		Stainless Steel Shelf x 1	N/A
Max. Number of Racks		10 (5x2 Boxes) x 2 Racks (RFU10SD)	7 (1x7 Boxes) x 6 Racks (RFC07SA)
Max. Number of Boxes		20 Boxes	42 Boxes
Material	In	Stainless Steel	High Polymer Coated Steel Plate Internal Door PE Foam
	Out	Powder Coated Steel Plate	High Polymer Coated Steel Plate
Dimension	In	340 x 355 x 300 (H)mm	480 x 430 x 470 (H)mm
	Out	460 x 585 x 680 (H)mm	640 x 490 x 950 (H)mm
Power		220V, 2.4A, 60Hz	220V, 2.4A, 60Hz
Weight		63kg	70kg

Standard Items

Main Body
Shelf
Power Cable
Manual

Lab Freezer

VS-25DF-500 / VS-40DF-500

- Long-Term Cryopreservation by excellent cooling capacity
- Direct cooling type of Small Deep freezer
- Vent-Port for solution of negative pressure occurrence
- Inner Double Door is minimized heat loss
- Prevention of dew on inner door's surface
- Equip of Block Condenser without Pin and filter
- Various Rack Style
- Ergonomic Door Lock System



Lab Freezer		VS-25DF-500	VS-40DF-500
Cooling System		Direct Cooling System	
TEMP	Range	-25℃ ~ 0℃	-40℃ ~ -20℃
	Sensor	PT100 Sensor	
Compressor		Hermetic Type	
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism	
Refrigerant		HFC (CFC Free Refrigerant System)	
Controller		Digital PID Controller	
Shelf		Included 3 Stainless Steel Shelves	
Material	In	Hypolymer Strong Steel	
	Out	Hypolymer Strong Steel	
	Inner Door	Powder Coated Steel	
Dimension	In (mm)	640 x 600 x 1,340 (H)mm	800 x 600 x 1,340 (H)mm
	Out (mm)	800 x 855 x 1,950 (H)mm	800 x 855 x 1,950 (H)mm
Consumption Power		980W	
Main Power		220V, 60Hz, 4.5A	
Net Weight		220Kg	

Standard Items

Main Body
Shelves
Power Cable
Manual

Option



7Days Chart Recorder



ICE MAKER

09

Vision Scientific
ICE MAKER



Snow Ice Maker

VS-625NS / VS-625N

- ✓ Snow Type Ice Maker
- ✓ Full Automation System for continual Icing
- ✓ Freezing and Keeping function at the same time
- ✓ Soft Ice type by Rolling Carve Type
- ✓ Water Level Sensor
- ✓ Ice Level Sensor
- ✓ Easy to use



Standard Items

Main Body
Supply Hose
Drain Hose
Scoop
Power Cable
Manual

Snow Ice Maker	VS-625NS	VS-625N
Production/ Day	50Liter	250Liter
Storage Capacity	25Liter	86Liter
Compressor	1/2HP, R404A	1HP, R404A
Dimension (in)	305 X 390 X 200(H)mm	425 X 450 X 450(H)mm
(out)	360 X 440 X 620(H)mm	500 X 550 X 1,195(H)mm
Material (in)	Stainless steel	Stainless Steel
(out)	Stainless Steel with ABS	Stainless Steel
Weight	40Kg	90Kg
Power	220V, 650W, 60Hz	220V, 1.8KW, 60Hz
Ice Type	Snow Type Ice	
Door	Tempered Glass Door	Front PC Door
Safety Device	Power Circuit Breaker, Ice Level Sensor, Water Level Sensor	
Accessory	Drain & Supply Hose, Scoop	



Snow Type Ice

Option



Water Filter
WF-001



Water Filter
WF-004



Water Pump
WP-001



VS-625NS



VS-625N

Flake Ice Maker

VS-625FS / VS-625F / VS-625

- ✓ Flake Type Ice Maker
- ✓ Full Automation System
- ✓ Icing and Keeping together
- ✓ Regular and hard ice by Screw Turbine type
- ✓ Trustworthy Safety Device for Water level
- ✓ Safety Device for Ice Level
- ✓ Easy to Use

Flake Ice Maker	VS-625FS	VS-625F	VS-625
Production/ Day	80kg	120kg	180kg
Storage Capacity	58Liter	120Liter	120Liter
Compressor	1/3HP , R404A	1/3HP , R404A	1/2HP , R404A
Dimension (in)	345 x 450 x 375(H)mm	450 x 425 x 630(H)mm	485 x 485 x 510(H)mm
(out)	600 x 560 x 740(H)mm	675 x 560 x 1,065(H)mm	990 x 635 x 1,190(H)mm
Material (in)	Stainless steel	Stainless Steel	Stainless Steel
(out)	Stainless	Stainless Steel	Steel with Powder coating
Weight	61Kg	83Kg	125Kg
Power	220V, 800W, 60Hz	220V, 800W, 60Hz	220V, 1.3KW, 60Hz
Ice Type	Flake Type Ice		
Door	Front PC Door		Tempered Glass Door
Safety Device	Power Circuit Breaker, Ice Level Sensor, Water Level Sensor		
Accessory	Drain & Supply Hose, Scoop		



Flake Type Ice

Option



Water Pump
WP-001



Standard Items

Main Body
Supply Hose
Drain Hose
Scoop
Power Cable
Manual



VS-625FS

VS-625F

VS-625

Bio Clean Room

Clean Room

✓ BIO Clean Room

The Clean Room make clean environment after Bacteria or other floating mater inthe air by HEPA filter

The Clean Room are kept suitable Air Flow and prevented outside AIR.

The Clean Room is used on Operation room, Incubation Room, Test Room and Food Progress Room and etc.

The Clean Room is controlled for Particle Occurrence as much as possible.

✓ CLASS 100

Class 100 is used on Bacteria-free operation Room,Clean Room, Test Room for particle, Facility for Injections and other facilities high cleanliness are needed.

Class 100 have high efficiency and fast recovery time. Also, Clas 100 is rare gotten user's effect.

But, there are high installation and management cost for Class 100.

There are Vertical Laminar Flow Type and Horizontal Laminar Flow Type.

✓ CLASS 1,000 - 10,000

Class1,000~10,000 are used on room high cleanliness are needed like Clinic Laboratory on Hospital, Facilities for making Medicine, Food Progress and etc.

✓ CLASS 100,000

Class 100,000 is made of simple construction like Microbial Culture Room, Plant Incubation Room, Wet Lab and others.

Because Class 100,000 can not be gottoned high Cleanlines, Clean bench is used in part

Clean Room Equipment



Room Size			
W	D	H (mm)	
2700	2700	2250	
3600	2700	2250	
2700	6900	2250	
3600	7200	2250	
4500	7200	2250	
6900	7200	2250	

Standard Items

Light Bank 3000-10LX

Chart Recorder

CO₂ controller 3000-02

Growth Stand VS-14S

Test Room for Low Temperature

Cold Room

/ Cold Room

Cold Room is for 4°C. It is used for Low TEMP. test, Storage of Medicine, Pharmaceutical, Seed and others on 4°C. If Access is often, AIR Curtain is installed for high temperature efficiency.

Shelves and Working table can be put in the Cold room..

/ Freeze Room

Freeze Room is used to be kept sample on -20°C.

Prefabricate Panel Specification	
Skin	Color sheet (silicon Polyester)
	Vinyl coating sheet
Insulation	Rigid Polyurethane
Density	0.035 – 0.40
Width	900mm
Length	1.8 – 7.0m
Thickness	50, 75, 100, 125, 150mm
Thermal Conductivity	0.018Kcal/mh °C

New Classic ME Precision Balances			
Model	W	D	H (mm)
VSC-202G	2700	2700	2250
VSC-203G	3600	2700	2250
VSC-205G	2700	6900	2250
VSC-208G	3600	7200	2250
VSC-210G	4500	7200	2250
VSC-214G	6900	7200	2250

* Above specification are example. Discuss it with VISION's Engineer enough.



Test Room Equipment
for Low Temperature

Air Curtain VAC-16

..... VAC-16

Working Bench

..... VWB-20

Column stand

..... VCS-20

Growth Room

Walk-in Chamber

- / Environmental Control facility the best condition for Plant growth like TEMP., Humidity, Lux and others are offered.
- / Strong assemble Panel with high Urethane insulation. It is strong, high warm and Construction time is shorted.
- / Therer are many optional items like Multi Program controller, Gas Controller, Shaking Device and others.
- / Available technical support like Microwave for Incubation, Intensity of Lux, Program control, Gas Control and etc.

Growth Room	
Temperature Range	10°C to 60°C
Humidity Range	40 to 85%RH
Wall Material	Urethane form panel, 50mm
Door	Over lap door, 850 x 1900mm
Utility	Interior lamp, Outlet, Air vent
Power	220 or 380V, 3Phase

Room Size				
Model		W	D	H (mm)
VSR-302G		2700	2700	2250
VSR-303G		3600	2700	2250
VSR-305G		2700	6900	2250
VSR-308G		3600	7200	2250
VSR-310G		4500	7200	2250
VSR-314G		6900	7200	2250

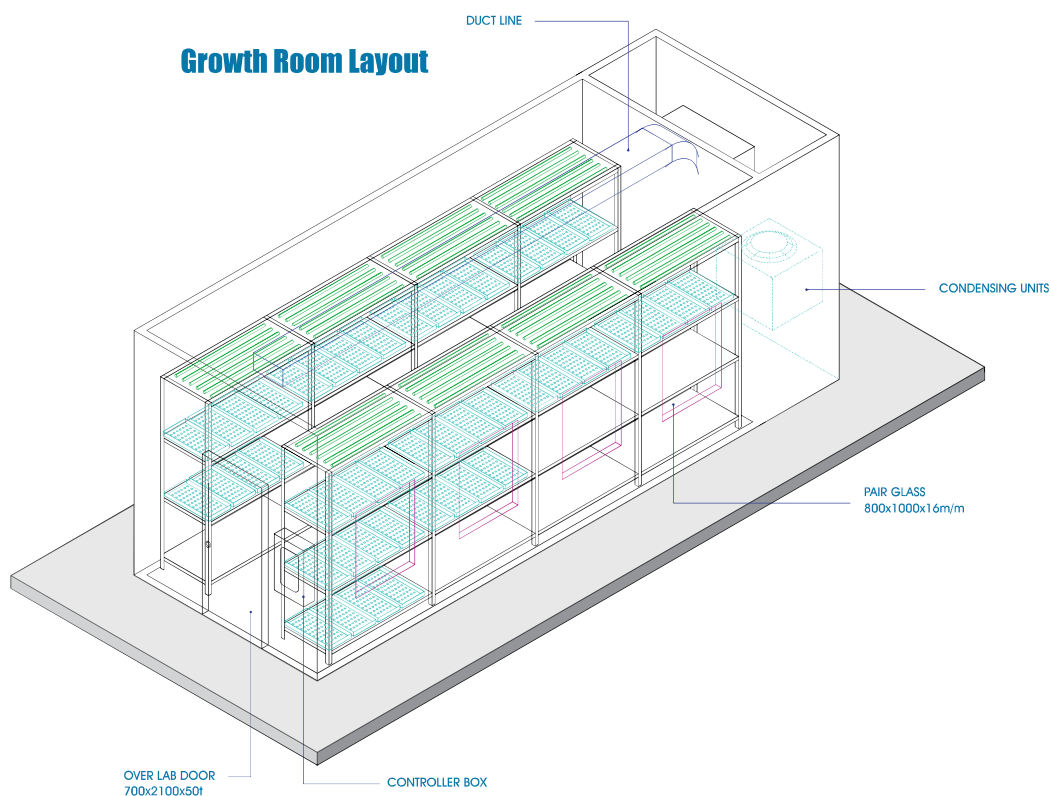
Option

Light Bank 3000-10LX
Chart Recorder
CO₂ controller 3000-02
Growth Stand VS-14S

* Above specification are example. Discuss it with VISION's Engineer enough.



Walk-in Chamber



Growth Stand



Illuminated Growth stand, Model VS-14S

Dimension	1300 x 500 x 1900(H)mm
Material	Stainless steel
Illumination	Fluorescent Lamp 40W x 8 EA
Shelf	5 (Illuminated shelf 4)
Height of stage	400mm
Control	Photo-period controller, 24hr.

※ Available order made product for stand size, number of lamp and shelves.

Laboratory Lay-out

- | | |
|-----------------|--|
| • Discussion | • The Expert visit to customer for collection of information |
| • Investigation | • After checking about Laboratory, Plan are offered. |
| • Design | • After making standard design, implementation design is finished. |
| • Contruction | • The expert by strict quality management construct. |
| • Completion | • After construction is finished, check it repeatedly |
| • Maintenance | • The expert would be offered quick and exact maintenance(After sales service) |

Culture Room



Multi Shaker



Growth Shelf

Growth Room



BOD Incubator



Shaking Incubator



Shaker



Table-top Centrifuge



Circulation Water Bath



Centra-Vac



Medicine Refrigerator



Deep Freezer



Drying Oven



Auto Steam Sterilizer

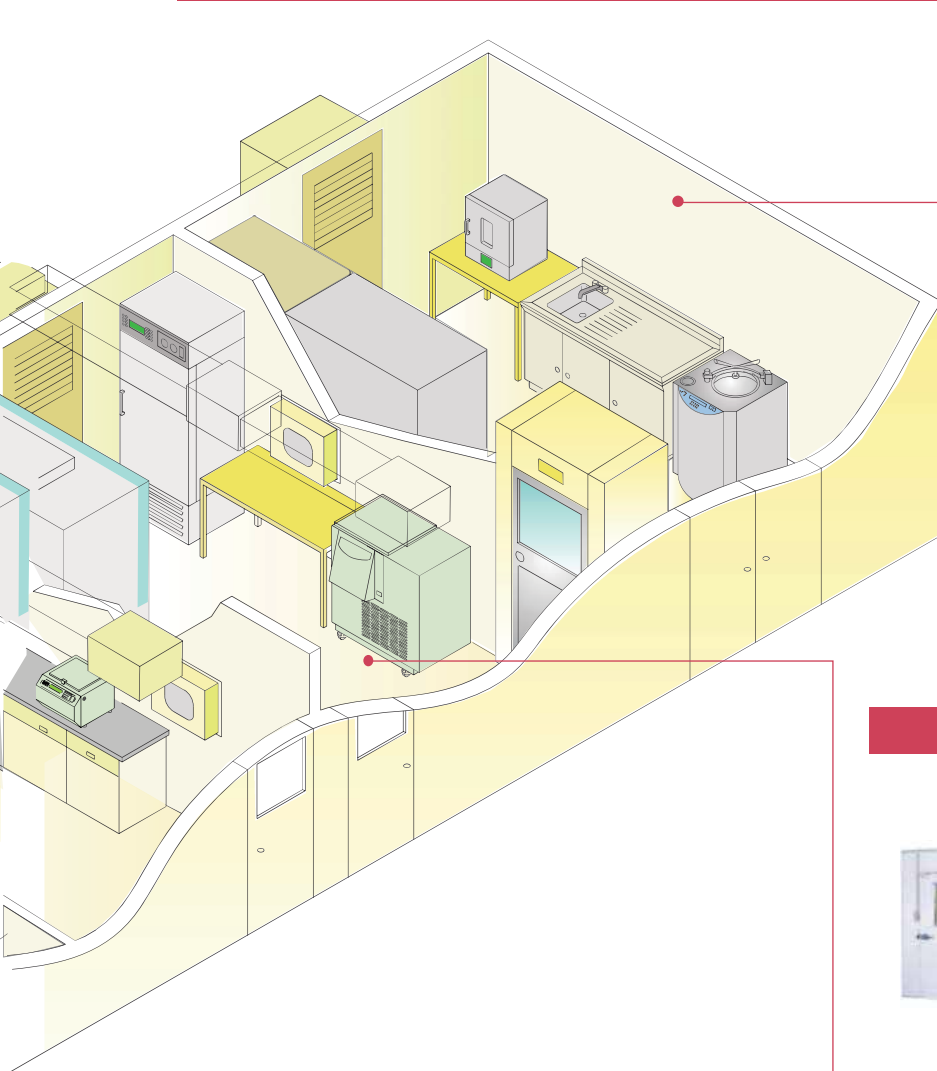


Ice Maker



High-speed Refrigerated Centrifuge

PREPARATION ROOM



CLEAN ROOM / WALK IN CHAMBER



CLEAN ROOM



Plant Growth Chamber



Clean Bench



CO₂ Incubator



Refrigerated Centrifuge



Twin Room Incubator

VISION NETWORK ALL OVER THE WORLD



* The product quality control and strict inspection and testing by product is issued.

* The remaining amount of this product failures occurring within one year will be a free repair.
However, the following cases even within the warranty period, we charge the actual cost.

1. In case Users of the negligence (unreasonable transportation of products, operations) if the failure and damage caused,
2. This product is non-specialized technicians to repair internal disagreements is defective
3. Fire, earthquake, flood and other acts of God or force majeure when the accident occurred as a failure
4. How to use or using a normal power (voltage) in violation of the case of failure

** Do not disassembly, modification and repairing without manufacturer's approval. If there are some problem on unit, cut off the main power. Then, contact to customer service center, please.

Disposal for unit trouble :

We strictly forbid any repair or exchange of parts by individuals except the repair by authorized engineer.
The product may be damaged or do not function properly. Furthermore, there is a danger of an electric shock or a fire.
If there are some problem on the unit, contact to local agency or us immediately.

. When you apply after sales service, let us know below point.

- Model name
- Purchase date and year (There are mentioned on barcode of unit)
- Trouble contents in detail with some photos.
- Let us know about organization name, user name, contact number

If you have any question, contact to local service team or our service center.

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Costechpia 11, Ver, 1.0 on 2019. 03. 22 VISION SCIENTIFIC



ISO 13485
LL-C (Certification)



ISO 9001



ISO 14001



Excellent Machine