1200°C Muffle Furnace with Vacuum

Model	SH-FU-1.5MGV	SH-FU-10MGV	SH-FU-31MGV
Max Temp	1200℃ (2192℉)		
Temp Controller	Programmable Controller(SP590)		
Heater Capa	1100 W	3000 W	6000 W
Capa	1.5L	10L	31L
Dimension Internal (W×D×H)	115x115x115mm	215x215x215mm	315x315x315mm
	4.53x4.53x4.53''	8.46x8.46x8.46''	12.40x12.40x12.40''
Dimension External (W×D×H)	530x490x730 mm	630x590x830mm	730x690x930mm
	20.87x19.29x28.74''	24.80x23.23x32.68''	28.74x27.17x36.61''
Material External	Steel Plate with powder heating coated		
Heater Element	KANTHAL A-1 (Ceramic heating)		
Insulation	Ceramic Board & Wool (Ceramic fiber)		
Electrical Requirements 120V, 50/60Hz, 1Φ	9.2 A	N/A	N/A
Cat. No.	FU3MG120		
Electrical Requirements 230V, 50/60Hz, 1Φ	4.8A	13.03A	26.1 A
Cat. No.	FU1.5MGV230	FU10MGV230	FU131MGV230
Electrical Requirements 230V, 50/60Hz, 3Φ	N/A	N/A	15.1 A
Cat. No.			FU131MGV230-3
Electrical Requirements 380V, 50/60Hz, 3Φ	N/A	N/A	9.1 A
Cat. No.			FU131MGV380-3

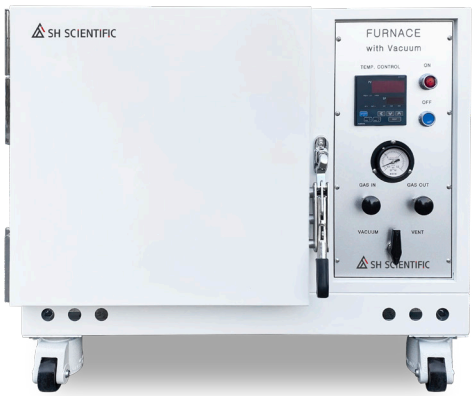
• Option

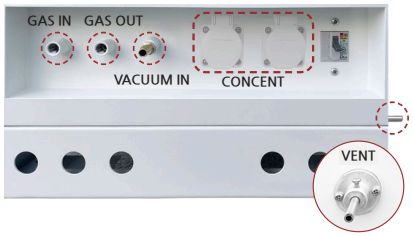
-Hybrid recorder
-MFC, BPR, Digital Vacuum Meter(Bullseye)

• Safety Device

-Automatic reset function incoming power cut
-Buzzer on when set time arrived
-Over temperature alarm

1500°C Muffle Furnace with Vacuum





Model	SH-FU-4.5MHV	SH-FU-18.7MHV
Max Temp	1500℃ (2732℉)	
Temp Controller	Programmable Controller(SP590)	
Sensor	R type	
Heater Capa	3300 W	10000 W
Capa	4.5 L	18.7 L
Dimension Internal (W×D×H)	150x200x150mm	250x300x250mm
	5.91x7.87x5.91''	9.84x11.81x9.84''
Dimension External (W×D×H)	630x590x830mm	730x690x930mm
	24.80x23.23x32.68''	28.74x27.17x36.61''
Material External	Steel Plate with powder heating coated	
Heater Element	SIC	
Insulation	Ceramic Board & Wool (Ceramic fiber)	
Electrical Requirements 230V ,50/60Hz, 1Φ	14.4A	N/A
Cat. No.	FU4.5MHV230	
Electrical Requirements 380V ,50/60Hz, 3Φ	N/A	15.2A
Cat. No.		FU18.7MHV380-3

• Option

-Hybrid recorder
-MFC, BPR, Digital Vacuum Meter(Bullseye)

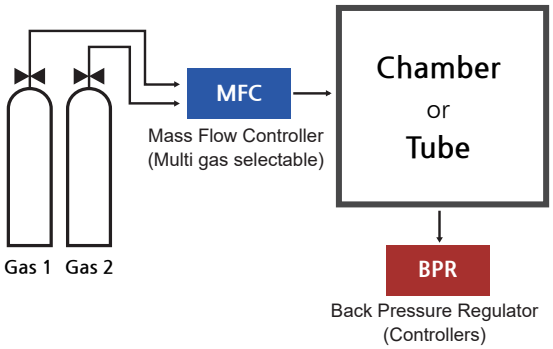
〈MFC〉 〈BPR〉 〈Bullseye〉

• Safety Device

-Automatic reset function incoming power cut
-Buzzer on when set time arrived
-Over temperature alarm

Mass Flow Controller(Multi gas selectable)

- Accessible PID valve tuning for best speed and stability.
- Custom valve orifice sizes: yields full-range stability.
- Control mass flow, vol. flow or pressure with one device.
- No warm-up: ready to control process flows in one second.



MC Series

One Unit with 98 Gas

MCV Series

Model	MC Series	MCS Series	MCV Series
Type	General	For Toxi Gas	For Vacuum
Flow Range	0 ~ 1 slpm / 0 ~ 5 slpm		
Mass Flow Accuracy at calibration conditions	±0.6% of reading or ±0.1% of full scale	±0.8% of reading or ±0.2% of full scale	
Operating Temperature Range	-10 to +60°C		
Temperature Accuracy	±0.75°C		
Operating Pressure full scale	145 PSIG		
Pressure Accuracy	Above 1 atm: ±0.5% of reading		
Typical Indication Response Time	< 10 ms	< 100 ms	
Typical Warm-Up Time	<1 Second		
Monochrome LCD	Simultaneously displays mass Flow, pressure and temperature	Simultaneously displays mass Flow, Volumetric Flow, pressure and temperature	
Mechanical Dimensions (HxWxD)	104.14x91.44x27.94mm / 4.1x3.6x1.1"		121.92x172.72x38.1mm /4.8x6.8x1.5"
Gas Selectable	98 Gas	128 Gas	98 Gas
Communication	RS-232		

Gas Select™ Preloaded Gases

PURE NON-CORROSIVE GASES		
Gas Number	**Short Name**	**Long Name**
14	C2H2	Acetylene
0	Air	Air
1	Ar	Argon
16	i-C4H10	i-Butane
13	n-C4H10	n-Butane
4	CO2	Carbon Dioxide
3	CO	Carbon Monoxide
60	D2	Deuterium
5	C2H6	Ethane
15	C2H4	Ethylene (Ethene)
7	He	Helium
6	H2	Hydrogen
17	Kr	Krypton
2	CH4	Methane
10	Ne	Neon
8	N2	Nitrogen
9	N2O	Nitrous Oxide
11	O2	Oxygen
12	C3H8	Propane
19	SF6	Sulfur Hexafluoride
18	Xe	Xenon

BREATHING GASES		
Gas Number	**Short Name**	**Long Name**
164	EAN-32	32% O2 / 68% N2
165	EAN	36% O2 / 64% N2
166	EAN-40	40% O2 / 60% N2
167	HeOx-20	20% O2 / 80% He
168	HeOx-21	21% O2 / 79% He
169	HeOx-30	30% O2 / 70% He
170	HeOx-40	40% O2 / 60% He
171	HeOx-50	50% O2 / 50% He
172	HeOx-60	60% O2 / 40% He
173	HeOx-80	80% O2 / 20% He
174	HeOx-99	99% O2 / 1% He
175	EA-40	Enriched Air-40% O2
176	EA-60	Enriched Air-60% O2
177	EA-80	Enriched Air-80% O2
178	Metabol	Metabolic Exhalant (16% O2/ 78.04% N2 / 5% CO2 / 0.96% Ar)

CHROMATOGRAPHY GASES		
Gas Number	**Short Name**	**Long Name**
29	P-5	5% CH4 / 95% Ar
206	P-10	10% CH4 90% Ar

WELDING GASES		
Gas Number	**Short Name**	**Long Name**
23	C-2	2% CO2 / 98% Ar
22	C-8	8% CO2 / 92% Ar
21	C-10	10% CO2 / 90% Ar
140	C-15	15% CO2 / 85% Ar
141	C-20	20% CO2 / 80% Ar
20	C-25	25% CO2 / 75% Ar
142	C-50	50% CO2 / 50% Ar
24	C-75	75% CO2 / 25% Ar
25	He-25	25% He / 75% Ar
143	He-50	50% He / 50% Ar
26	He-75	75% He / 25% Ar
144	He-90	90% He / 10% Ar
27	A1025	90% He / 7.5% Ar / 2.5% CO2
28	Star29	Stargon CS 90% Ar / 8% CO2 / 2% O2

PURE CORROSIVES* MCS Series		
Gas Number	**Short Name**	**Long Name**
32	NH3	Ammonia
80	1Butene	Butylene (1-Butene)
81	cButene	Cis-Butene (cis-2-butene)
82	iButene	Iso-Butene
83	tButene	Trans-Butene
84	COS	Carbonyl Sulfide
33	Cl2	Chlorine
85	CH3OCH3	Dimethylether
34	H2S	Hydrogen Sulfide (H2S)
31	NF3	NF3 (Nitrogen Trifluoride)
30	NO	NO (Nitric Oxide)
36	C3H6	Propylene (Propylene)
86	SiH4	Silane (SiH4)
35	SO2	Sulfur Dioxide

***Pure Corrosive gases are only available on MCS-Series instruments that arecompatible with these gases.**
Gas numbers 33 and 35 require special valves on controllers. Request at time of order.

BIOREACTOR GASES		
Gas Number	**Short Name**	**Long Name**
145	Bio-5M	5% CH4 / 95% CO2
146	Bio-10M	10% CH4 / 90% CO2
147	Bio-15M	15% CH4 / 85% CO2
148	Bio-20M	20% CH4 / 80% CO2
149	Bio-25M	25% CH4 / 75% CO2
150	Bio-30M	30% CH4 / 70% CO2
151	Bio-35M	35% CH4 / 65% CO2
152	Bio-40M	40% CH4 / 60% CO2
153	Bio-45M	45% CH4 / 55% CO2
154	Bio-50M	50% CH4 / 50% CO2
155	Bio-55M	55% CH4 / 45% CO2
156	Bio-60M	60% CH4 /40% CO2
157	Bio-65M	65% CH4 /35% CO2
158	Bio-70M	70% CH4 / 30% CO2
159	Bio-75M	75% CH4 / 25% CO2
160	Bio-80M	80% CH4 / 20% CO2
161	Bio-85M	85% CH4 / 15% CO2
162	Bio-90M	90% CH4 / 10% CO2
163	Bio-95M	95% CH4 / 5% CO2

LASER GASES		
Gas Number	**Short Name**	**Long Name**
179	LG-4.5	4.5% CO2 / 13.5% N2 / 82% He
180	LG-6	6% CO2 / 14% N2 / 80% He
181	LG-7	7% CO2 / 14% N2 / 79% He
182	LG-9	9% CO2 / 15% N2 / 76% He
183	HeNe-9	9% Ne / 91% He
184	LG-9.4	9.4% CO2 / 19.25% N2 / 71.35% He

O2 CONCENTRATOR GASES		
Gas Number	**Short Name**	**Long Name**
197	OCG-89	89% O2 / 7% N2 / 4% Ar
198	OCG-93	93% O2 / 3% N2 / 4% Ar
199	OCG-95	95% O2 / 1% N2 / 4% Ar

REFRIGERANTS* MCS Series		
Gas Number	**Short Name**	**Long Name**
100	R-11	Trichlorofluoromethane
101	R-115	Chloropentafluoroethane
102	R-116	Hexafluoroethane
103	R-124	Chlorotetrafluoroethane
104	R-125	Pentafluoroethane
105	R-134A	Tetrafluoroethane
106	R-14	Tetrafluoromethane
107	R-142b	Chlorodifluoroethane
108	R-143a	Trifluoroethane
109	R-152a	Difluoroethane
110	R-22	Difluoromonochloromethane
111	R-23	Trifluoromethane
112	R-32	Difluoromethane
113	RC-318	Octafluorocyclobutane
114	R-404A	44% R-125 / 4% R-134A / 52% R-143A
115	R-407C	23% R-32 / 25% R-125 / 52% R-134A
116	R-410A	50% R-32 / 50% R-125
117	R-507A	50% R-125 / 50% R-143A

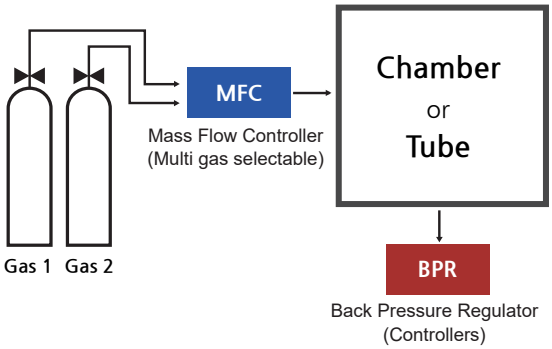
***Refrigerant gases are only available on MCS-Series instruments that are compatible with these gases.**

FUEL GASES		
Gas Number	**Short Name**	**Long Name**
185	Syn Gas-1	40% H2 + 29% CO + 20% CO2 + 11% CH4
186	Syn Gas-2	64% H2 + 28% CO + 1% CO2 + 7% CH4
187	Syn Gas-3	70% H2 + 4% CO + 25% CO2 + 1% CH4
188	Syn Gas-4	83%H2+14%CO+3%CH4
189	Nat Gas-1	93% CH4 / 3% C2H6 / 1% C3H8 / 2% N2 / 1% CO2
190	Nat Gas-2	95% CH4 / 3% C2H6 / 1% N2 / 1% CO2
191	Nat Gas-3	95.2% CH4 / 2.5% C2H6 / 0.2% C3H8 / 0.1% C4H10 / 1.3% N2 / 0.7% CO2
192	Coal Gas	50% H2 / 35% CH4 / 10% CO / 5% C2H4
193	Endo	75% H2 + 25% N2
194	HHO	66.67% H2 / 33.33% O2
195	HD-5	LPG 96.1% C3H8 / 1.5% C2H6 / 0.4% C3H6 / 1.9% n-C4H10
196	HD-10	LPG 85% C3H8 / 10% C3H6 / 5% n-C4H10

STACK GASES		
Gas Number	**Short Name**	**Long Name**
200	FG-1	2.5% O2 / 10.8% CO2 / 85.7% N2 / 1% Ar
201	FG-2	2.9% O2 / 14% CO2 / 82.1% N2 / 1% Ar
202	FG-3	3.7% O2 / 15% CO2 / 80.3% N2 / 1% Ar
203	FG-4	7% O2 / 12% CO2 / 80% N2 / 1% Ar
204	FG-5	10% O2 / 9.5% CO2 / 79.5% N2 / 1% Ar
205	FG-6	13% O2 / 7% CO2 / 79% N2 / 1% Ar

Back Pressure Regulator(Controllers)

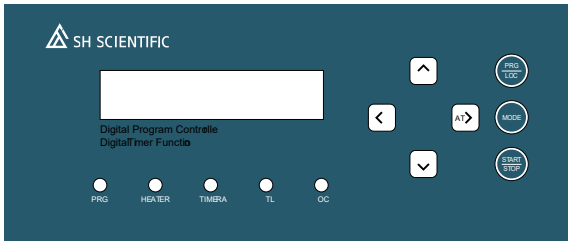
- Tunable PID control loop
- Control pressure at any point in system with remote sense port
- Customizeable valves
- Control at variable flow rates



BPR Series

Model	BPR Series	BPRS Series
Type	General	For Toxi Gas
Pressure Range	1PSIG ~ 15PSIG	
Standard Accuracy	± 0.25% (≥ 1 psi)	
Repeatability	± 0.08% Full Scale	
Typical Response Time	< 100 ms	
Warm-up Time	< 1 Second	
Operating Temperature	-10 to +60℃	
Monochrome LCD	Displays Pressure	
Mechanical Dimensions (HxWxD)	104.14x91.4x27.94mm / 4.1x3.6x1.1"	
Communication	RS-232	

Programmable Controller (FC-1000)



- LCD Display
- Program mode, Standard Mode Selectable.
- Parameter setting
- Auto tune function
- Timer function
- PV,SV can be displayed together

Display	Size(WxH)	190x75mm / 7.48x2.95''
	PV/SP Display	4 Digit
Operation Mode		Program / Standard
Control Mode		1CH Control
Max Channel		-
Features	Patterns & Segments	5 patterns, 9 Segments / pattern, Total 45 Segments
	Cycles	1 ~ 999
Input	TC	K

Programmable Controller (SP-590)

- High Accuracy(±0.1%) with excellent Function
- Multi Input : TC, RTD, DCV
- Simultaneous and Multi output available in Max 4 Points
- Easy parameter and value setting
- Function to protect over shoot
- RUN/STOP Function in the external Input contact point
- Display of Running status in Auxiliary Output
- Large Program Capacity : 2 Patterns / 30 Segments
- Variety of Auxiliary Output available (ex IS, TS, PEND etc)
- Input Piece Bias Function(Max 4 zone)
- Automatic PID Parameter Calculation
- Variety of communication Protocols
- Reliable quality(CE, CUL, ISO applied)

Display	Size(WxHxL)	96x96x68mm(3.8x3.8x2.68'') / 72x72x68mm(2.83x2.83x2.68'')
	PV/SP Display	4 Digit
Operation Mode		Program / Reset, 2 Zone PID
Control Mode		1CH Control
Max Channel		-
Pattern & Segments		2 Pattern / Max 30 segments
Input	TC	K, J, E, T, R, B, S, L, N, U, W, C, Platinel II
	RTD	Pt100Ω, JPt100Ω
	Analog Voltage Input	-10~20mV, 0~100mV, 0.4~2.0V DC, 1~5V DC, 0~10V DC
Communication	Interface	RS485
	Protocol	PC-Link, MODBUS(ASCII, RTU), SYNC(Master, Slave)
	Speed	Max 115,200 bps
Power	Power	100 ~ 240V AC, 50 ~ 60Hz
	Power Consumption	Max 10W

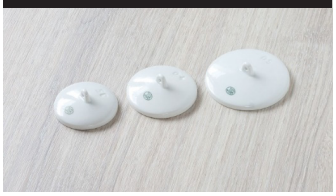
Hybrid Recorder
Options

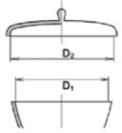
- 50mm thermal transfer method of paper recorder
- Data logger functions for recording without paper
- Supports RS485 communication and dedicated communication port to set or monitor parameters in real-time by PC/PLC
- Multi-input with high accuracy 0.2% level (RTD, TC, Analog)
- 2-channel simultaneous recording in graphic mode and digital mode
- High visibility and easy setting by LCD dot matrix
- Supports various option I/O functions
- Small size(W96×H96×L100mm / 3.78x3.78x3.94''), light weight

Record accuracy		±0.5%F.S.
Alarm output		CH1(AL1, AL2), CH2(AL1, AL2) Relay out put(250 VAC/30 VDC 3 A 1 a)
Alarm output hysteresis		ON/OFF interval setting for alarm output: 1 to 999digit variable
Communication output		RS485 communication output(Modbus RTU protocol)
Set method		Setting by front keys
Sampling cycle		500 ms/channel x 2 channels = 1000 ms
Dielectric strength		2300 VAC 50/60 Hz for 1 min.(charging terminal of the other polarity)
Vibration		0.75 mm amplitude at frequency of 10 to 55 Hz (for 1 min.) in each of X, Y, Z directions for 1 hour
Relay life cycle		Mechanical: Over 5,000,000 operations, Electrical: Over 100,000 operations
Insulation resistance		Over 100 MΩ (at 500 VDC megger)
Noise resistance		Square shaped noise by noise simulator (pulse width 1 ㎲)±2 kV
Print	Method	Direct thermal line print
	Resolution	8 dot/mm
	Dots	384 dot/Line
	Life cycle	50 km
Record	Graphic mode	• Record speed(recording paper speed): 10, 30, 60, 120, 240, 480, 940 mm/hour • Memo cycle: 30 s, 1 m, 5 m, 10 m, 15 m, 30 m, 1 h, 2 h, 3 h, 4 h, 8 h, 16 h, 24 h
	Digital mode	TEXT mode record cycle: 00 m 05 s to 99 m 59 s
	Paper	Thermal Direct Receipt Paper (57 mm x 16 m)
	Paper supply method	Clamshell Type
	Language	Korean, English
Environment	Ambient temperature	0 to 50 ℃, storage: -20 to 60 ℃
	Ambient humidity	35 to 85%RH, storage: 35 to 85%RH
Approval		CE
Unit weight		Approx. 700 g

Ceramic consumable & Furnace accessory

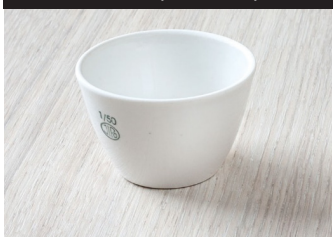
Lid for crucible

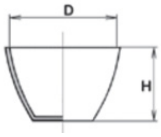




Model	D1xD2(mm)
641 321 000 301 (D/30)	30x34
641 321 000 351 (D/35)	35x39
641 321 000 401 (D/40)	40x44
641 321 000 451 (D/45)	45x49
641 321 000 501 (D/50)	50x54
641 321 000 601 (D/60)	60x64
641 321 000 701 (D/70)	70x74
641 321 000 801 (D/80)	80x84

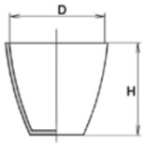
Crucible (Low form)





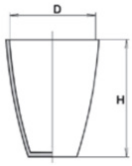
Model	DxH(mm)	V/ml approx.
641 321 100 301 (1/30)	30x19	5
641 321 100 351 (1/35)	35x22	10
641 321 100 401 (1/40)	40x25	17
641 321 100 451 (1/45)	45x28	21
641 321 100 601 (1/60)	60x38	62
641 321 100 701 (1/70)	70x44	91

Crucible (Middle form)



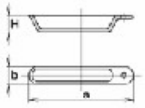
Model	DxH(mm)	V/ml approx.
641 321 200 301 (2/30)	30x25	10
641 321 200 351 (2/35)	35x28	12
641 321 200 401 (2/40)	40x32	20
641 321 200 451 (2/45)	45x36	30
641 321 200 501 (2/50)	50x40	45
641 321 200 601 (2/60)	60x48	80
641 321 200 701 (2/70)	70x56	120
641 321 200 801 (2/80)	80x62	200

Crucible (High form)



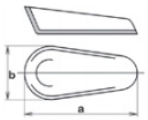
Model	DxH(mm)	V/ml approx.
641 321 300 301 (3/30)	30x38	15
641 321 300 351 (3/35)	35x44	26
641 321 300 401 (3/40)	40x50	35
641 321 300 451 (3/45)	45x56	50
641 321 300 501 (3/50)	50x62	72
641 321 300 601 (3/60)	60x75	120

Combustion boat



Model	axbxH(mm)
641 312 214 200 (214/2)	75x13x8
641 312 214 300 (214/3)	105x14x9
641 312 214 400 (214/4)	85x13x8
641 312 214 800 (214/8)	90x13x8

Weighing boat



Model	axb(mm)
641 329 252 001 (252/0)	37x17
641 329 252 101 (252/1)	53x23
641 329 252 201 (252/2)	64x29

Crucible with lid

43(D)x27(H), 19ml

Gooch crucible

30(D)x36(H), 17ml / 35(D)x43(H), 25ml
39(D)x49(H), 35ml / 60(D)x71(H), 120ml

Annealing dish

40(D)x20(H), 21ml / 50(D)x25(H), 35ml
60(D)x30(H), 64ml / 70(D)x35(H), 103ml

Annealing dish

50(a)x35(b)x12(H), 6ml / 62(a)x40(b)x12(H), 13ml
74(a)x49(b)x14(H), 14ml / 95(a)x65(b)x14(H), 40ml

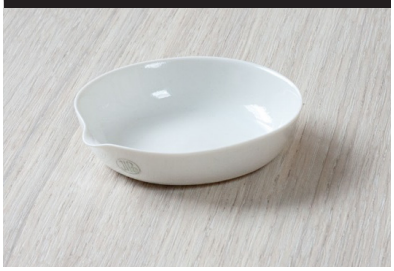
Evaporating dish

50(D)x20(H), 20ml / 63(D)x25(H), 30ml
80(D)x32(H), 60ml / 81(D)x38(H), 107ml
94(D)x42(H), 140ml / 100(D)x40(H), 150ml
125(D)x50(H), 285ml

Evaporating dish

96(D)x30(H), 110ml / 110(D)x37(H), 160ml

Evaporating dish



60(D)x14(H), 20ml / 80(D)x20(H), 55ml
100(D)x25(H), 110ml / 130(D)x30(H), 250ml

Evaporating dish

54(D)x22(H), 22ml / 70(D)x30(H), 62ml
86(D)x33(H), 93ml / 98(D)x40(H), 154ml
112(D)x50(H), 265ml

Unglazed, Mortar rough

56(D)x36(H), 30ml / 63(D)x41(H), 70ml
90(D)x56(H), 160ml / 125(D)x71(H), 400ml

Pestle unglazed

20(D)x88(L)

Pestle unglazed

14(D)x54(L) / 24(D)x115(L)
30(D)x135(L) / 36(D)x150(L)
42(D)x175(L) / 55(D)x210(L)

Pestle glazed

30(D)x135(L) / 36(D)x150(L)

Funnel Buechner

48(D1)x38(D2)x1(D3)x24(H1)x43(H2), 35ml
62(D1)x45(D2)x1(D3)x30(H1)x64(H2), 70ml
77(D1)x58(D2)x1(D3)x35(H1)x64(H2), 120ml
97(D1)x70(D2)x2(D3)x40(H1)x71(H2), 240ml
116(D1)x95(D2)x2(D3)x49(H1)x83(H2), 400ml
130(D1)x110(D2)x2(D3)x52(H1)x85(H2), 600ml

Plate for desiccator DIN

140(D) / 190(D) / 235(D) / 280(D)

Plate for desiccator CSN

189(D) / 241(D) / 290(D)

Plate with cavities

112(a)x81(b)x25(c), 6Qty
115(a)x91(b)x17(c), 12Qty

Stirring spattle+scoop

103(L) / 148(L) / 164(L) / 187(L)
200(L) / 250(L)

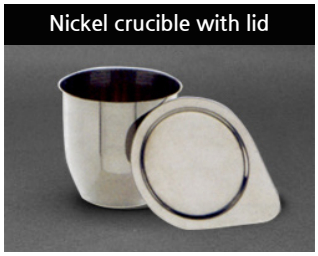
Quartz boat

Model No.	Size (ml.LxWxH)	Temp-Limit
SH-QB-2	2ml, 15×48×8mm / 0.59x1.89x0.31''	Operation Temp1100℃ Max Temp 1250℃
SH-QB-3	3ml, 16×77×11mm / 0.63x3.03x0.43''	
SH-QB-5	5ml, 20×77×11mm / 0.79x3.03x0.43''	
SH-QB-8	8ml, 20×92×11mm / 0.79x3.62x0.43''	
SH-QB-10	10ml, 20×102×11mm/ 0.79x4.02x0.43''	
SH-QB-15	15ml, 27×105×11mm / 1.06x4.13x0.43''	

Quartz crucible with lid

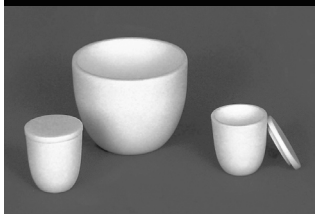
Model No.	Capa(ml)	Size	Temp-Limit
SH-QC-30	30 ml	ø47, ø25xh36mm	Operation Temp1100℃ Max Temp 1250℃
SH-QC-50	50 ml	ø54, ø34xh42mm	
SH-QC-100	100 ml	ø70, ø34xh55mm	
SH-QC-250	250 ml	ø110, ø50xh80mm	
SH-QC-500	500 ml	ø130, ø70xh100mm	

Nickel crucible with lid



Model No.	Capa(ml)	Size	Temp-Limit
SH-NC-30	30 ml	ø38xh38mm	Operation Temp 600~1000℃
SH-NC-50	50 ml	ø48xh48mm	
SH-NC-100	100 ml	ø55xh55mm	

Alumina crucible



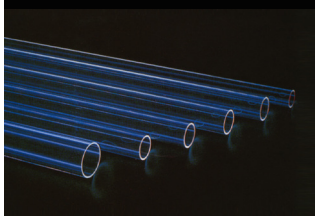
Model No.	Capa(ml)	Size	Max Temp
SH-ALC-10B	10 ml	ø29xh30mm	1700℃
SH-ALC-20B	20 ml	ø39xh29mm	
SH-ALC-30B	30 ml	ø52xh39mm	
SH-ALC-50B	50 ml	ø61xh49mm	
SH-ALC-100B	100 ml	ø72xh58mm	
SH-ALC-150B	150 ml	ø81xh67mm	
SH-ALC-200B	200 ml	ø86xh70mm	
SH-ALC-250B	250 ml	ø92xh75mm	
SH-ALC-500B	500 ml	ø110xh105mm	

Lid	
Model No.	Capa(mm)
SH-ALC-10L	10 ml
SH-ALC-20L	20 ml
SH-ALC-30L	30 ml
SH-ALC-50L	50 ml
SH-ALC-100L	100 ml
SH-ALC-150L	150 ml
SH-ALC-200L	200 ml
SH-ALC-250L	250 ml
SH-ALC-500L	500 ml

Crucible tongs

Model No.	Openning Size(Φ)	Length
SH-CT-300	2~30 Φ	300mm / 11.81''
SH-CT-400	2~30 Φ	400mm / 15.75''
SH-CT-500	2~30 Φ	500mm / 19.69''

Quartz tube



Model No.	Size(I.D/O.D×L)	Model No.	Size(I.D/O.D×L)
SH-QT-50	46/50×1000mm/1.81/1.97x39.37''	SH-QT-50(1200)	46/50×1000mm/1.81/1.97x39.37''
SH-QT-60	55/60×1000mm/2.17/2.36x39.37''	SH-QT-60(1200)	55/60×1000mm/2.17/2.36x39.37''
SH-QT-80	74/80×1000mm/2.91/3.15x39.37''	SH-QT-80(1200)	74/80×1000mm/2.91/3.15x39.37''
SH-QT-100	94/100×1000mm/3.70/3.94x39.37''	SH-QT-100(1200)	94/100×1000mm/3.70/3.94x39.37''
SH-QT-120	114/120×1000mm/4.49/4.72x39.37''	SH-QT-120(1200)	114/120×1000mm/4.49/4.72x39.37''
SH-QT-150	144/150×1000mm/4.49/5.91x39.37''	SH-QT-150(1200)	144/150×1000mm/4.49/5.91x39.37''
SH-QT-180	174/180×1000mm/6.85/7.08x39.37''	SH-QT-180(1200)	174/180×1000mm/6.85/7.08x39.37''
SH-QT-200	193/200×1000mm/7.60/7.87x39.37''	SH-QT-200(1200)	193/200×1000mm/7.60/7.87x39.37''

High temp proof gloves

Model No.	Temp-Limit
SH-SG-500	Max 500℃
SH-SG-900	Max 900℃

Alumina tube

Model No.	Size(I.D/O.D×L)	
SH-AT-25	20/25x1000mm / 0.79/0.98x39.37''	Alumina Purity : OVER 98%
SH-AT-30	24/30x1000mm / 0.94/1.18x39.37''	
SH-AT-35	28/35x1000mm / 1.10/1.38x39.37''	
SH-AT-50	42/50x1000mm / 1.65/1.97x39.37''	
SH-AT-60	50/60x1000mm / 1.97/2.36x39.37''	
SH-AT-70	60/70x1000mm / 2.36/2.76x39.37''	
SH-AT-80	70/80x1000mm / 2.76/3.15x39.37''	
SH-AT-90	80/90x1000mm / 3.15/3.54x39.37''	
SH-AT-100	88/100x1000mm / 3.46/3.94x39.37''	
SH-AT-120	110/120x1000mm / 4.33/4.72x39.37''	

Gas sealing mask

Model No.	Material
SH-SM-50	50Φ TUBE용, Aluminum(Option: SUS), 2ea/pack
SH-SM-60	60Φ TUBE용, Aluminum(Option: SUS), 2ea/pack
SH-SM-80	80Φ TUBE용, Aluminum(Option: SUS), 2ea/pack
SH-SM-100	100Φ TUBE용, Aluminum(Option: SUS), 2ea/pack
SH-SM-120	120Φ TUBE용, Aluminum(Option: SUS), 2ea/pack