

EYELA

Safe and clean dry heating equipment without worrying about oil spillage, splashing, smoking or ignition

Dry block bath with stirrer

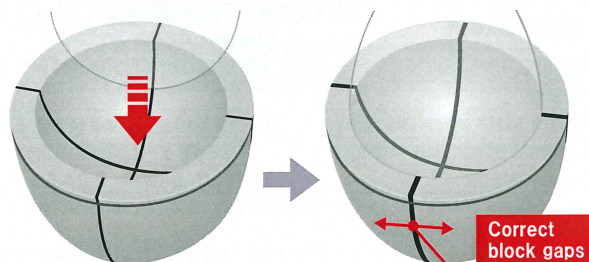
Model BBS + RCH-1000

This dry-type heating equipment is clean, easy-to-use, and free of oil hazards. The uniquely constructed aluminum block has a heat-transfer performance equivalent or superior to that of an oil bath, enabling uniform and rapid heating.

SynFlex™



Flexible aluminum block fits into flask



The aluminum block is designed in which it corrects the gap according to the variation of the glass vessel and expansion/contraction due to heat. There is no damage to the flask due to expansion/contraction during heating, and stable heat transfer performance is maintained at all times.

Eliminates dangers caused by oil bath



The aluminum block makes a clean and safe environment that eliminates the hazards of splashing, ignition, smoking, and hot oil spills during use.

Uniform and safe heating (up to 250°C)

The block is made of aluminum alloy, which provides good heat transfer throughout the block and prevents hot spots that are common in oil baths, thus ensuring uniform and safe heating.

TOKYO RIKAKIKAI CO., LTD.

SynFlex™ series that can be combined in various ways to suit your applications



System for reaction vessel with cock



Triple holder system



Simplified system for small-volume synthesis



Quadruple Schlenk tube system



Catalyst screening system



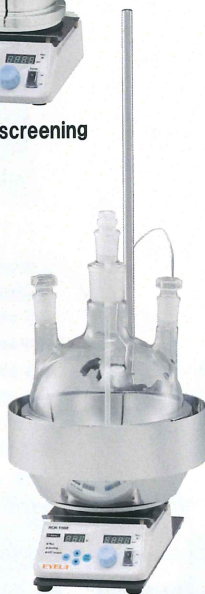
Aluminum beads bath system



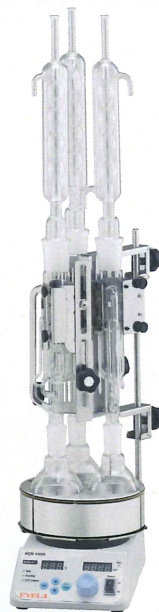
Reagent distillation system for small volume



1L pear shaped flask system



5L non-contact stirring system

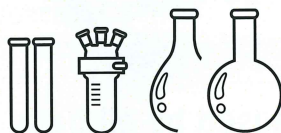


Soxhlet fat extraction system



Anhydrous solvent distillation system

■ Configuration



Reaction vessel
Test tube
Separable flask
Pear & round shaped flask



Aluminum block Model BBS

- Multi series
5 to 150mL
- Fix series
200 to 5000mL
- Aluminum bath



**Hot plate magnetic stirrer
Model RCH-1000**

SynFlex series can be combined with various configurations of vessel sizes and types, since aluminum blocks and optional parts can be selected according to the purpose of research.

■ Specifications

Product name	Hot plate magnetic stirrer
Model	RCH-1000
Cat. No.	264288
Temperature control range	Max. 310°C (temp. of hot plate)
Rotation speed range	50 to 1500rpm (at no load)
Stirrer capacity	10mL to 20L (water)
Safety function	Fuse, thermal fuse, self-diagnostic function (upper limiter)
Motor	DC brushless motor, 25W output
Heater	600W
Stirrer plate materials/size	Die-cast aluminum, ceramic coating, ϕ 135 mm
External dimension (mm)	165W x 275D x 90H
Power supply	220VAC, 630VA, 2.9A 50/60Hz

※Specifications are based on room temperature at 20°C, rated power supply voltage, 50 Hz, and no load.

※When using BBS-3HLD, use it with rotation speed range of 400rpm or more. Select BBS-1HLD when lower speed rotation is required.

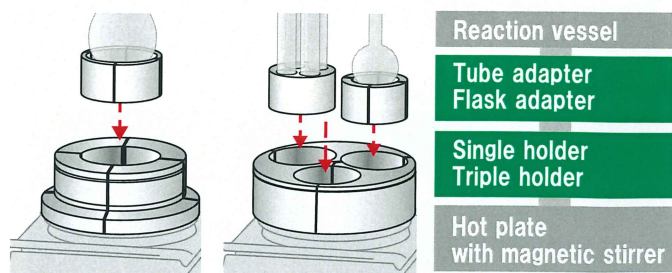
※Accessories: External temperature sensor (Pt100 Ω), heat insulation plate for model BBS series

■ Ultimate temperature (aluminum block BBS+stirrer RCH-1000)

Temp. control /accuracy	P.I.D. control, ± 1 to 3°C
Max. ultimate temperature (temp. of aluminum block)	250°C (Empty flask of 1L or smaller) 200°C (Empty flask of 2L) 180°C (Empty flask of 3L or bigger)

Multi series (5 to 150mL)

Multi-series for small volume vessels consisting of a combination of adapters for each reaction vessel and single or triple holders



Single/triple holder

Holder	Model	Cat. No.
Single holder	BBS-1HLD	239810
Triple holder	BBS-3HLD	239820

Tube adapter

Adapter	Size	Model	Cat. No.
For test tubes	φ 12×8 pcs	BBS-12T8I	239940
	φ 24×4 pcs	BBS-24T4I	239920
For separable flasks	50mL, φ 38mm	BBS-38TI	248830
	100mL, φ 45mm	BBS-45TI	266590
	100mL, φ 50mm	BBS-50TI	248840
	150mL, φ 60mm	BBS-60TI	239930

※Model BBS-45TI is for single holder only. The size above is the diameter of glass vessel.

Flask adapter

Adapter	Volume	Standard	Size	Model	Cat. No.
For pear shaped flask	10mL	JIS	φ 32mm	BBS-32RI ※1	239840
	20mL	JIS	φ 35mm	BBS-35RI ※2	239850
	30mL	JIS	φ 41mm	BBS-41RI ※1	239860
	50mL	JIS	φ 51mm	BBS-51RI ※3	239880
		ISO	φ 56mm	BBS-56EI ※1	240960
	100mL	ISO	φ 60mm	BBS-60EI ※1	240970
JIS		φ 64mm	BBS-64RI ※3	239900	
For round shaped flasks	5mL	ISO	φ 30mm	BBS-30RI	239830
	10mL	JIS	φ 32mm	BBS-32RI ※1	239840
		ISO	φ 35mm	BBS-35RI ※2	239850
	25mL	ISO	φ 41mm	BBS-41RI	239860
		JIS	φ 45mm	BBS-45RI ※1	239870
	50mL	ISO	φ 51mm	BBS-51RI ※3	239880
		JIS	φ 53mm	BBS-53RI ※1	239890
	100mL	ISO	φ 64mm	BBS-64RI ※1	239900
		JIS	φ 65mm	BBS-65RI ※1	239910
150mL	JIS	φ 75mm	BBS-75FI	245790	

※Flask tolerance when using triple holder: +1mm (※1), +0mm (※2), ±2mm (※3)

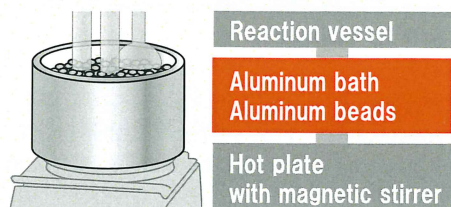
※The size above is the diameter of glass vessels.

■List of stirring bar compatibility (for Multi series)

Model	Cylinder	Ellipse	Oval	Football	Octagon
Single holder	×	○	○	○	○
Triple holder	○	×	○	○	×

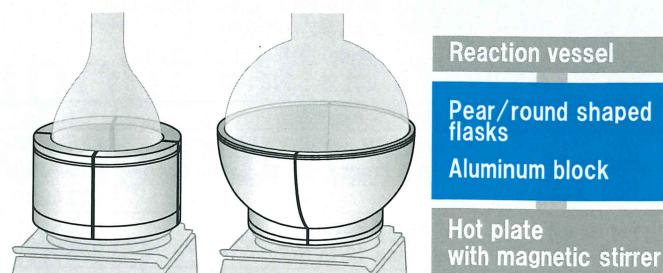
Aluminum bath

Aluminum bath that can be used with a wide variety of vessels by placing aluminum beads in the bath



Fix series (200 to 5000mL)

Fix Series for large capacity vessels for direct mounting of reaction vessels onto aluminum blocks



Aluminum block

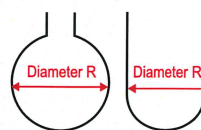
Adapter	Volume	Standard	Size	Model	Cat. No.
For pear shaped flask	200mL	JIS	φ 76 mm	BBS-76EB	239950
	250mL	ISO	φ 80 mm	BBS-80RB	240370
	300mL	JIS	φ 85 mm	BBS-85RB	240380
	500mL	ISO/JIS	φ 100 mm	BBS-100EB	239960
	1000mL	JIS	φ 133 mm	BBS-133EB	239970
	2000mL	JIS	φ 166 mm	BBS-166RB	239980
For round shaped flasks	200mL	JIS	φ 80 mm	BBS-80RB	240370
	250mL	ISO	φ 85 mm	BBS-85RB	240380
	300mL	JIS	φ 93 mm	BBS-93RB	240390
	500mL	ISO	φ 105 mm	BBS-105RB	240400
		JIS	φ 108 mm	BBS-108RB	240410
	1000mL	ISO	φ 131 mm	BBS-131RB	240420
		JIS	φ 135 mm	BBS-135RB	240430
	2000mL	ISO	φ 166 mm	BBS-166RB	239980
		JIS	φ 170 mm	BBS-170RB	239990
	3000mL	ISO	φ 185 mm	BBS-185RB	240000
		JIS	φ 200 mm	BBS-200RB	240010
	4000mL	ISO	φ 207 mm	BBS-207RB	240020
		ISO	φ 223 mm	BBS-223RB	240030
	5000mL	JIS	φ 230 mm	BBS-230RB	240040

※Flask tolerance : ±4 mm

※The size above is the diameter of the glass vessel.

How to select aluminum blocks or flask adapters compatible with your glass vessels

The numbers of model BBS and vessels diameter R must be the same.



Model: BBS- □□ RI/RB/EB/TI
Diameter R: □□ mm

※Diameter R = glass girth ÷ 3.14

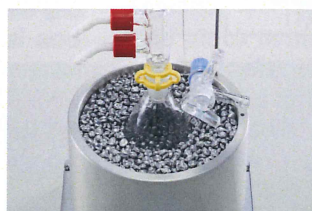
■List of stirring bar compatibility (for Fix Series)

Model	Cylinder	Ellipse	Oval	Football	Octagon
Fix series	×	○	○	○	○

Aluminum bath model BBS-130AB
Cat. No. 265770

Aluminum beads (2L)
Cat. No. 262250

※Aluminum beads are not suitable for experiments that require temperature accuracy. Temperature conditions vary depending on the vessel shape, liquid volume, beads volume, and room temperature. Also, the temperature cannot be controlled by liquid or beads temperature.



Safety cover



Avoids the risk of burns and enhances heat retention.

Model BBS-1LSC (up to 1L)

Cat. No. 240070

Model BBS-5LSC (2 to 5L)

Cat. No. 240100

List of parts for mounting		Cat. No.
For model BBS-1LSC	Pole for RCH (ϕ 10 x 450mm)	264790
	Mounting bracket for 1L safety cover	264800
	Clamp	234980
For model BBS-5LSC	ZC clamp x 2pcs	124560
	Stand base (2 to 5L)	240080

Small separable flask set



Large openings allow for easy removal of product and cleaning. The four types of small separable flasks (50, 100, and 150 mL) have multiple connections and can be used for a variety of applications.

	Vessel volume	Standard	Cat. No.
①	50mL (with graduation)	ϕ 38, 6-port (GL14 \times 3, NS14/23 \times 3)	248810
	100mL (with graduation)	ϕ 50, 6-port (GL14 \times 3, NS14/23 \times 3)	248820
②	150mL (without graduation)	ϕ 60, 3-port (NS14/23 \times 2, NS19/26 \times 1)	251070
③	150mL (without graduation)	ϕ 60, 4-port (F 15/25 \times 3, F 19/38 \times 1)	251080

Catalyst screening vessel



Three types of catalyst screening vessels allow up to 24 small samples to be loaded simultaneously for atmospheric pressure and high pressure reaction screening. All vessels are subject to the same atmosphere and temperature conditions. Use the single holder BBS-1HLD to heat the vessels.

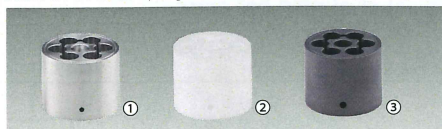
• Catalyst screening vessel:
Maximum working pressure 5MPa

Product name	Volume	Model	Cat. No.
Catalyst screening vessel	1.5 to 7.0mL x 6 pcs	HIP-7506	248370
	0.3 to 1.3mL x 18 pcs	HIP-7518	248380
	0.1 to 0.8mL x 24 pcs	HIP-7524	248390
Relief and ball valve on-head part *Pressure gauge -100/0/2400kPa		HIP-HEAD2	248400

Microscale CSTR®



The Microscale CSTR is a fully mixed, continuous reactor consisting of six reaction baths connected next to each other to form a continuous flow reactor as a whole. It is also very effective for flow conditions involving solids. It can be used for various applications such as reaction, crystallization, etc.

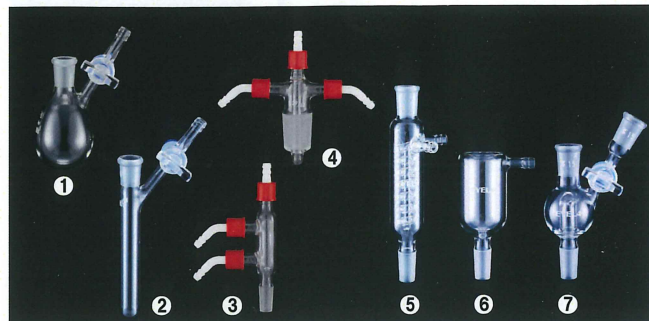


Model	Synthesis scale	Reactor material	Cat. No.
HIP-CSTR-SUS	Approx. 14mL (Priming volume)	① Stainless steel (SUS316L)	278360
HIP-CSTR-PTFE		② PTFE	278370
HIP-CSTR-TK		③ Impervious graphite (Tokabate) TK11	278380

Aluminum block transfer handle

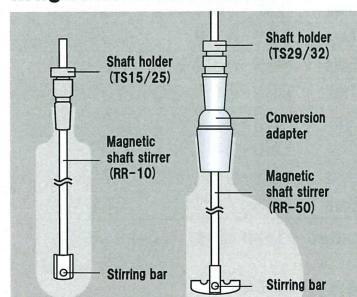
Product name	Model	Cat. No.
Adapter remover	BBS-01LAR	240280
Transport handle (up to 1L)	BBS-1LTH	240060
Transport handle (2 to 5L)	BBS-5LTH	240090

Reaction vessel, condenser



	Product name	Taper joint	Volume/OD	Cat. No.	
①	Pear shaped flask with 3-way cock	F 15/25	50mL · JIS	264200	
			100mL · JIS	264210	
	Pear shaped flask with stop cock	F 15/25	50mL · JIS	264230	
			100mL · JIS	264240	
			ϕ 18 mm	264110	
			ϕ 24 mm	264120	
			ϕ 30 mm	264130	
	Schlenk flask with 3-way cock	F 15/25	ϕ 34 mm	264140	
			ϕ 18 mm	264150	
			ϕ 24 mm	264160	
			ϕ 30 mm	264170	
	Schlenk flask with stop cock	F 15/25	ϕ 34 mm	264180	
			ϕ 18 mm	264150	
②	Schlenk flask with stop cock	F 15/25	ϕ 24 mm	264160	
			ϕ 30 mm	264170	
	Small condenser	NS14/23	-	240120	
			F 15/25	240130	
④	Ultra-small condenser	F 29/32	-	240140	
			F 15/25	271300	
⑤	Dimroth condenser	F 15/25	100 mm	271300	
⑥	Dry ice condenser	F 15/25	-	271310	
			F 15/25	10mL	271320
⑦	Receiving trap	F 15/25	GL14	271330	
			F 15/25	10mL	271340
			2-way cock	50mL	271350

Magnetic shaft stirrer



The stirring bar is fixed to the tip of the magnetic impeller and is suspended a few millimeters above the bottom of the flask (floating state). There is no risk of cracking or friction due to contact with the flask, preventing the stirring bar from flying off.

Operating temperature range: up to 180°C
Operating speed range: up to 600rpm
Shaft diameter: 8 mm
Shaft length (model RR-10/50): 300/400mm

Product name	Standard	Model	Cat. No.
Magnetic shaft stirrer	For small vessel	RR-10	240150
Magnetic shaft stirrer	For 3 to 5L flask	RR-50	248850
Teflon® stirring bar (octagon)	ϕ 8x22mm (for RR-10)	MO-1	240910
Teflon® Strong magnetic force stirring bar (octagon)	ϕ 8x25mm (for RR-10)	MO-2	240920
	ϕ 8 \times 38mm (for RR-50)	ST-2L	213120
Shaft holder	F 15/25, 1 pc	-	240930
	F 29/32, 1 pc	-	240940
Conversion adapter	Top: F 29, Bottom: F 45	-	248860