

TAIATSU PORTABLE REACTOR

TVS-1(10ml~500ml)

TVS-N2 Screwed Seal Method(10ml~100ml)

TVS-N2 Cap-Bolt Seal Method(120ml~500ml)



TVS-N2
(Cap-Bolt Seal Method)

TVS-N2
(Screwed Seal Method)

TVS-1

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Introduction

Portable Reactor TVS series is compact type vessel which can use for the experiment and research variously at the wide range from low pressure to high pressure.

- Wide variety of size : Capacity (min.)10mℓ~(max.) 500mℓ.
- It can use as a reactor for high pressure, since TVS-N2 series has high working limit (pressure to 20MPa) and (temperature to 300°C).
- It is possible to make the user's reaction system which suits the experimental purpose by attaching of pressure gauge, safety valve or agitator (VP motor), etc.

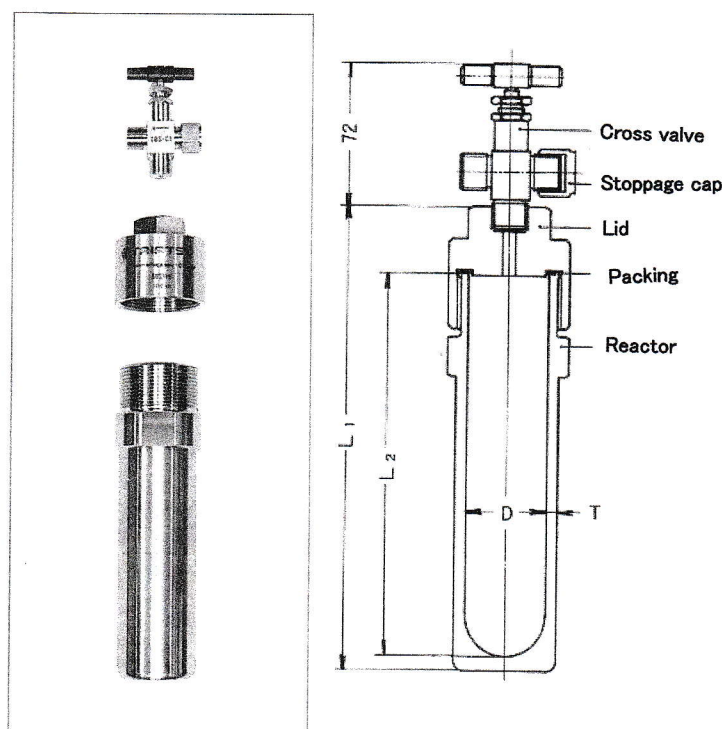
(Refer to □Applications PDF of <PRODUCTS> Portable Reactor.

A valve is attached in the body upper part respectively as it shows a standard Portable Reactor in the photos. With respect to TVS-1 Portable Reactor, it is able to supply closed type which a valve is not attached in the body upper part. In particular when putting it in the dry oven and experimenting, closed type TVS-1 Portable Reactor is available. The closed type is attached the stoppage joint instead of the cross valve at the body upper part and held the pressure of reaction vessel.

Applications

- Sampling and storage under the pressurization.
- Hydrothermal synthetic experiment and various chemical reaction experiments.
- Test and research of refrigerant and refrigerating machine oil.
- N2 gas supercritical experiment.

Portable Reactor TVS-1



9 kinds of reactors from 10mℓ to 500mℓ.

A cross valve is attached, and it is also possible to supply the closed type reactor according to the request.

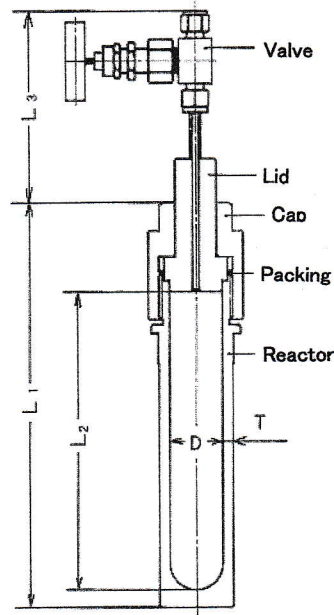
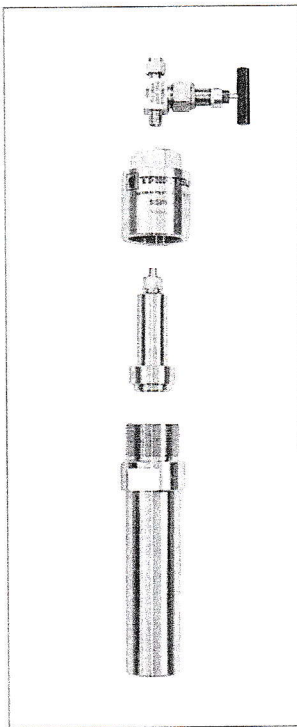
Specifications

Max. working pressure	10MPa
Max. working temperature	200°C
Sealing material	Teflon packing
Vessel material	SUS316
Vessel capacity	10mℓ~500mℓ
Sealing mechanism	Lid screwed seal method

Dimensions

Capacity (mℓ)	L1 (mm)	L2 (mm)	D (mm)	T (mm)	Actual Capacity (mℓ)	Weight (kg)
10	115	90	13	3	12	0.5
20	135	105	18	3	26	0.6
30	155	125	20	3.5	38	0.75
50	187	155	23	3.5	62	0.95
100	208	173	30	5	118	1.5
150	210	172	35	5.5	159	1.8
200	233	192	40	5.5	231	2.3
300	253	210	45	5.5	321	2.9
500	324	279	50	6	530	4.2

■ Portable Reactor TVS-N2 (Screwed Seal Method)



Specifications

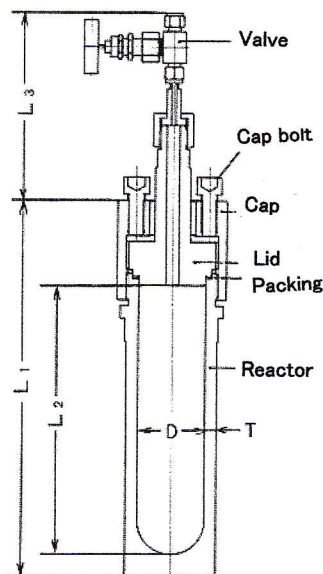
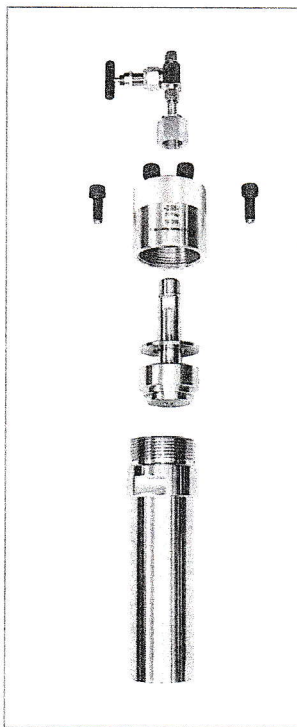
Max. working pressure 20MPa
 Max. working temperature 260°C
 Sealing material Teflon packing
 Vessel material SUS316
 Vessel capacity 10ml~100ml
 Sealing mechanism Lid screwed seal method

Dimensions

Capacity (ml)	D (mm)	T (mm)	L1 (mm)	L2 (mm)	Actual Capacity (ml)	Weight (kg)	L3 (mm)
10	13	3.5	128	90	12	0.6	83
30	20	4.5	169	120	37	1.1	85
50	23	4.5	204	150	61	1.3	86
100	30	6	231	170	117	2.2	90
100P	30	6	231	170	117	2.3	138

※Connections are 1/4" except for 100P (PF5/8)

■ Portable Reactor TVS-N2 (Cap-Bolt Seal Method)



Packing can use SUS or Teflon both.
 It is able to use up to max.300°C when setting the SUS packing.

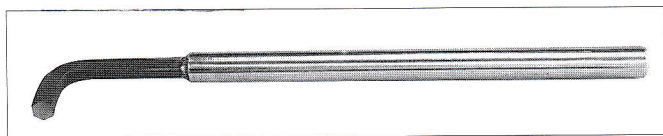
Specifications

Max. working pressure 20MPa
 Max. working temperature
 When using Teflon packing 240°C
 When using SUS packing 300°C
 Sealing material Teflon packing
 SUS packing
 Tightening torque approx. 6000N·cm
 (when setting SUS packing)
 Vessel material SUS316
 Vessel capacity 120ml~500ml
 Sealing mechanism Cap-bolt seal method

Dimensions

Capacity (ml)	D (mm)	T (mm)	L1 (mm)	L2 (mm)	Actual Capacity (ml)	Weight (kg)	L3 (mm)
120	40	7.5	178	110	130	3.4	148
200	40	7.5	248	180	218	4.3	148
300	45	8	280	200	306	5.6	158
500	50	10	309	220	501	8.8	155

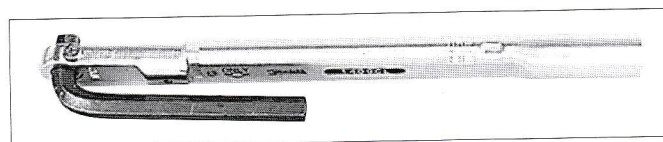
■ Standard Accessories



● Hexagon Wrench, Bar type

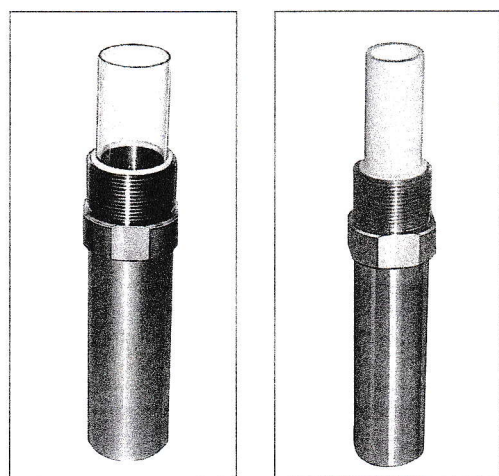
Hexagon wrench attaches to Portable Reactor TVS-N2 (Cap-Bolt Seal Method) as a standard accessory.

■ Optional Accessories



● Torque Wrench

It is using for the management of tightening torque when using SUS packing in TVS-N2 (Cap-Bolt Seal Method). At the time, please tighten the cap bolt in about 6000N·cm.



Glass Inner Cylinder Teflon Inner Cylinder

● Glass Inner Cylinder

Teflon Inner Cylinder

When inserting the Inner Cylinder into the reaction vessel, the fluid does not contact with a metallic surface of vessel inside, so that an experiment of a corrosive fluid also becomes possible.

And to reduce the deterioration, please use by less than 150°C of temperature when employing the Teflon Inner Cylinder.

● Spare Packings (Consumption Parts)

We recommend to be purchased the spare packings rather much as consumable if there are lot of experimental times.

■ Applications

Refer to □Applications [PDF](#) of <PRODUCTS> Portable Reactor about the combination system with Portable Reactor.

※The specifications may be changed without advanced notice for improvement of the products.

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