

TAIATSU CHEMICAL PRESSURE REACTOR

TEM-D300M (300mℓ/2MPa/200°C)

TEM-D500M (500mℓ/2MPa/200°C)

TEM-D1000M (1000mℓ/2MPa/200°C)

TEM-D1500M (1500mℓ/2MPa/200°C)



TEM-D1000M with Control Box

TAIATSU TECHNO CORPORATION
Tokyo, Japan

■ Introduction

Simple type Chemical Pressure Reactor TEM-D series is pressurization laboratory equipment. It is equipped with one body type agitator "VP Motor" of magnetic drive and motor, and it will be provided the safety and usability. Agitator motor "VP Motor" which installs high performance rare earth magnet in the shaft of DC brushless motor induces the shaft from outside. A power transmission and rotating section does not expose, so the safety is improved. The installation of lid is easy by adopting of VP motor, and experimental efficiency improves.

Chemical Pressure Reactor can be used up to max. working pressure 2MPa and temperature 200°C. The 4 kinds of vessel capacity 300mℓ, 500mℓ, 1000mℓ and 1500mℓ are being introduced here, but additionally the producing of small capacity vessel 100mℓ and 200mℓ, or large capacity 3000mℓ is also possible, so please consult to us.

It is attached spare parts (packings) by standard equipment, and also the purchase of optional spare parts (packings) is recommended to use this pressure reactor for a long time.

■ Features

- Compact Design
- Usability
- Safety

■ Main Specifications

Model		TEM-D300M	TEM-D500M	TEM-D1000M	TEM-D1500M	
Reactor Main Body	Max.working temperature	200°C				
	Max.working pressure	2MPa				
	Vessel capacity	300mℓ	500mℓ	1000mℓ	1500mℓ	
	Material	Reaction vessel	SUS316			
		Lid	SUS316			
		Lower flange	SUS304			
Packing		Teflon				
Control Box	Temp.indication controller	Digital display type PID control with auto-tuning function Setting temp. range: 0~200°C (Min. 0.1°C) Indication accuracy: $\pm 0.3\%FS \pm 1$ digit				
	Temp.sesnor	Thermocouple K (CA)				
	Agitator RPM meter	RPM indicator range 100rpm~1000rpm (Min.10rpm)				
	Volt meter	Heater volume range 0~100V				
	Power source	AC100V 1 ϕ 50/60Hz 15A				

※It is attached the terminal for recorder at the rear of control box.

■ Control Box

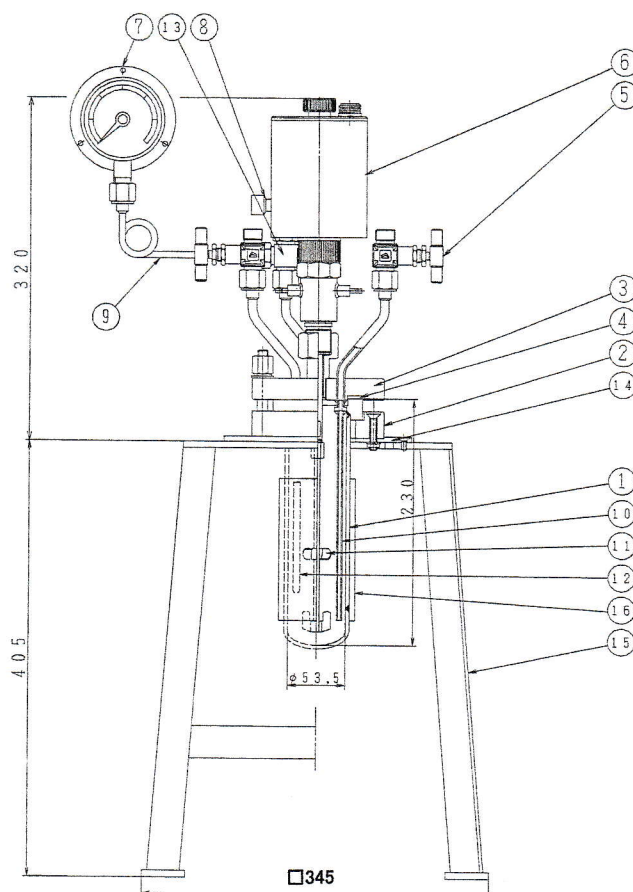


Exclusive Control Box attaches to Chemical Pressure Reactor TEM-D series. It is able to control and check the temperature, and also control the low temperature relatively by the control volume switch for heater output.

Additionally the following 4 kinds of data are displayed at high illumination LED display part on the control box at one time.

- Rotation speed of VP motor (RPM)
- Load current value (A)
- Torque (N·m)
- Load factor (%)

System Configuration & Components of TEM-D300M

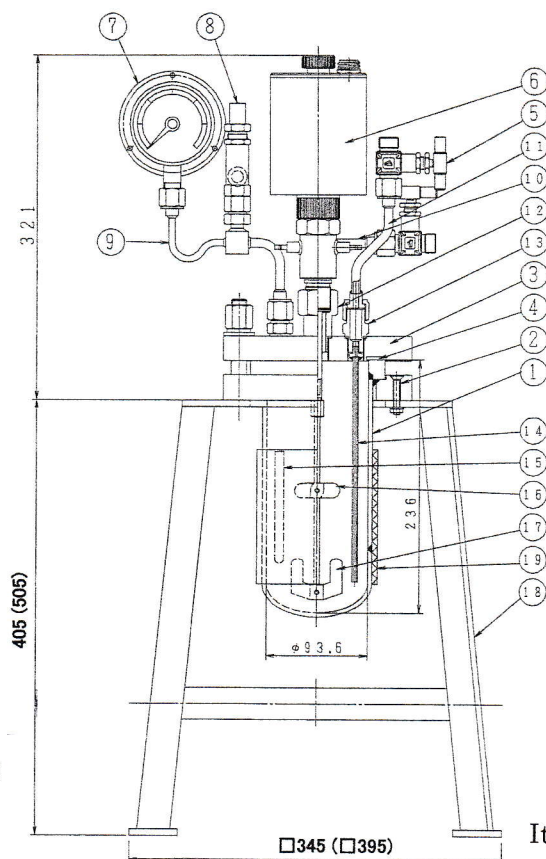


Model	Capacity
TEM-D300M	300mℓ
Max.working Pressure	Max.working Temperature
2MPa	200°C

It is impossible to put temperature up to 200°C in some case by the specific heat of the fluid.

No.	Part Name	Material	Q'ty	Remarks
①	SUS reaction vessel	SUS316	1	φ 53.5 × 230mmDepth
②	Lower flange	SUS304	1	
③	Lid	SUS316	1	attached (3) Nozzles & (1) Adaptor for VP motor (Welded)
④	Sealed packing	Teflon	1	D-86U-T
⑤	Needle valves	SUS316	2	Male-male NBS-01, for Inlet & Outlet (each 1)
⑥	VP motor	SUS316	1	Magnetic drive + Motor one body type Agitator
⑦	Pressure gauge	SUS316	1	3MPa, Compound type, φ 75
⑧	Safety valve	SUS316	1	Spring type, 2MPa set
⑨	Nozzles for PG	SUS316	1	
⑩	Dip tube	SUS316	1	
⑪	Stirring blades	SUS316	2	Inclined paddle 2-blade type & Achor type (each 1)
⑫	Thermowell	SUS316	1	
⑬	T-joint	SUS316	1	
⑭	Ring plate for fixing	SUS316	1	φ 174 × φ 72 × 5t
⑮	Stand	SS-400	1	□345 × 405mmH, Green Baking finish
⑯	Band Heater		1	100V750W
	Control box		1	attached with pressure reactor main body
	Spare packing		1	included as standard accessories
	Tool & Tool box		1	included as standard accessories

System Configuration & Components of TEM-D500M, TEM-D1000M & TEM-D1500M



() : TEM-D1500M

Model	Capacity
TEM-D500M	500ml
TEM-D1000M	1000ml
TEM-D1500M	1500ml

Max.working Pressure	Max.working Temperature
2MPa	200°C

It is impossible to put temperature up to 200°C in some case by the specific heat of the fluid.

No.	Part Name	Material	Q'ty	Remarks
①	SUS reaction vessel	SUS316	1	φ 93.6 × 121mmDepth(D500M), φ 93.6 × 236mmDepth(D1000M), φ 106.3 × 236mmDepth(D1500M)
②	Lower flange	SUS304	1	
③	Lid	SUS316	1	attached (3) Nozzles & (1) Adaptor for VP motor
④	Sealed packing	Teflon	1	D-126U-T(D500M, D1000M), D-159U-T(D1500M)
⑤	Needle valves	SUS316	2	Male-male NBS-01, for Inlet & Outlet (each 1)
⑥	VP motor	SUS316	1	Magnetic drive + Motor one body type Agitator
⑦	Pressure gauge	SUS316	1	3MPa, Compound type, φ 75
⑧	Safety valve	SUS316	1	Spring type, 2MPa set
⑨	Nozzles for PG & SV	SUS316	1	
⑩	Nozzle No.1	SUS316	1	L-type
⑪	Nozzle No.2	SUS316	1	S-type
⑫	Adaptor for VP motor	SUS316	1	
⑬	Joints for flange	SUS316	4	
⑭	Dip tube	SUS316	1	
⑮	Thermowell	SUS316	1	
⑯	Stirring blade	SUS316	1	Inclined paddle 2-blade, down flow
⑰	Stirring blade	SUS316	1	Anchor type
⑱	Stand	SS-400	1	□345 × 405mmH(D500M, D1000M), □395 × 505mm(D1500M) Green baking finish
⑲	Band Heater			100V600W(D500M), 100V900W(D1000M), 100V950W(D1500M)
	Control box		1	attached with pressure reactor main body
	Spare packing		1	included as standard accessories
	Tool & Tool box		1	included as standard accessories

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