

Non-Stirred Pressure Vessels

KLB offers a broad selection of non-stirred pressure vessels in convenient styles, sizes and pressure ranges for laboratory use.

This line has different sizes, temperature and pressure combinations, Split ring or Screw Cap Closure; all designed to provide convenient vessels for laboratory procedures that must be performed under pressure at elevated temperatures.



1000 ml vessel with blank
head and split-ring Closure



300 ml vessel with blank
head Split ring Closure,
Stand and Heater



1000 ml Vessel
removable head, gauge,
rupture disk and Valves

Many of these non-stirred vessels are offered with a blank head with no port or fittings. These can be supplied with PTFE liner and cap to be used as hydro-thermal vessel.

These should be considered only as a starting point for custom built vessels as they do not include a safety rupture disc

Users who take delivery of vessels without safety relief devices installed must also take the responsibility for installing adequate protective devices before the vessel is placed in service.

User must check the vapor pressure at operating temperature to ensure that operating conditions are within safety limits.

Model Number NS -	1323	1346	2520	2540	3043	4043	5043
Size mL	50	100	160	300	500	1000	2000
Maximum Pressure	3000 psig (200 Bar)						
Maximum Temperature	350 Deg Centigrade						
Temperature Sensor	Type K Thermocouple						
Vessel Internal Dia. mm	34	34	64	64	76	100	125
Vessel Internal Depth mm	57	115	50	100	110	130	165
Closure	Split ring with compression bolts , PTFE gasket						

Valve	Swagelok 1/4" NPT , outlet 0.25 inch tube adaptor, Gas inlet, Liquid sampling, gas vent
Pressure Gauge	0~3000 psig/200 Bar , 100 mm Dia.

PTFE LINED NON STIRRED DIGESTION VESSEL



Model Number	TD1020	TD1322	TD1345	TD2234	TD2543	TD4057
Size mL	23	50	100	200	350	1000
Maximum Pressure	1800 psig (120 Bar)					
Maximum Temperature	200 Deg. Centigrade					
Closure	Screw Cap	Screw Cap	Screw Cap	Screw Cap	Screw Cap	Split ring
Closure OD mm	64	80	80	100	110	155
Vessel Height mm	115	117.5	172.5	147.5	182.5	218
Vessel Outer Dia. mm	45	55	55	75	88	126

Vessel Internal Dia mm	34	45	45	65	75	110
PTFE Liner Internal Dia	24	35	35	55	65	100
PTFE Liner Depth mm	55	55	110	85	110	145
Seal	O Ring	O Ring	O Ring	O Ring	O Ring	O Ring
Compression bolts	Six	Six	Six	Six	Six	Ten

High Pressure Compact Laboratory Reactors

	These are compact removable head reactors capacity 25 to 160 ml. These are for users who do not require wide variety of options or investigators with limited space or budgets, Investigators building multiple reactor installations for combinatorial chemistry or high throughput investigations can stack these reactors with common controller. These vessels are rated for maximum working pressure of 200 bar. The maximum operating temperature with PTFE gasket for up to 350 °C The 25, 50, 100 and 160 mL reactors are equipped with gas inlet and outlet valves, a liquid sampling valve, pressure gage, safety rupture disc, internal thermocouple and external thermocouple in addition to the internal stirrer. Due to limited space, internal cooling loop can not be provided. As option , cold finger can be used.
--	--

Model Number	C-SR1020	C-SR1323	C-SR1346	C-SR2020	C-SR2520
Size mL	25	50	100	100	160
Maximum Pressure	3000 psig (200 Bar)				
Maximum Temperature	350 Deg Centigrade				
Temperature Sensor	Type K Thermocouple				
Vessel Internal Dia. mm	25	34	34	50	64
Vessel Internal Depth mm	50	58	115	50	50
Closure	Split ring with six compression bolts , PTFE gasket				
Motor	Variable speed DC motor 90 watt 0~1750 RPM				
Drive	Zero leak magnetic drive 16 KgF-Cm torque				
Impeller 4 blade Dia. mm	20	20	20	35	35
Internal Cooling Optional	N. A	Cold Finger		Cold Finger	Cold Finger
Valve	Swagelok 1/8” NPT , outlet 0.25 inch tube adaptor Gas inlet, Liquid sampling, gas vent				

Pressure Gauge	0~3000 psig/200 Bar , 100 mm Dia.				
Heater mounted on stand	400 W	400 W	600 W	400 W	400 W
Controller	Programmable temperature control with DC-SSR, RPM control with DC regulated power supply, over temperature safety cut-off. Display of Reactor temperature, RPM , heater temperature , Option for Pressure display				
Power	230 V 50 Hz.1 Phase				

High Pressure Bench Top Laboratory Reactors Series 13X



These are Standard removable head or fixed head reactors capacity 25 to 100 ml.

These vessels are rated for maximum working pressure of 200 bar. The maximum operating temperature with PTFE gasket for up to 350 °C

The reactors are equipped with gas inlet and outlet valves, a liquid sampling valve, pressure gage, safety rupture disc, internal thermocouple and external thermocouple in addition to the internal stirrer.

The mounting is on base plate with four buffers to take vibrations at high RPM

The heavy duty base allows to use various options like BPR, condenser, cooling coil etc.

Model Number	BT-SR1020	BT-SR1323	BT-SR1346
Volume mL	25 mL	50 mL	100 mL
Maximum Pressure	3000 psig (200 Bar)		
Maximum Temperature	350 Deg Centigrade		
Temperature Sensor	Type K Thermocouple		
Vessel Internal Dia. mm	25	34	34
Vessel Internal Depth mm	50	58	115
Closure	Split ring with PTFE gasket (Six 3/8" UNF compression bolts)		
Motor	Variable speed DC motor 90 watt 0~ 3000 RPM		

Magnetic Drive	16 KgF-Cm torque with belt drive for 0-2000 RPM		
Impeller 4 blade Dia. mm	21 mm	21 mm	21 mm
Internal Cooling Option	Cold Finger		
Valve	Swagelok 1/8" NPT , outlet 0.25 inch tube adaptor Gas inlet, Liquid sampling, gas vent		
Pressure Gauge	0~3000psig/200Bar, 100 mm dia		
Heater	450 W	450 W	600 W
Controller	Programmable temperature control with DC-SSR, RPM control with DC regulated power supply, over temperature safety cut-off. Display of Reactor temperature, RPM , heater temperature , Option for Pressure display		
Power	230 V 50 Hz.1 Phase		

High Pressure Bench Top Laboratory Reactors Series 25X



These are Standard removable head or fixed head reactors capacity 100 to 600 ml.

These vessels are rated for maximum working pressure of 200 bar. The maximum operating temperature with PTFE gasket for up to 350 °C

The reactors are equipped with gas inlet and outlet valves, a liquid sampling valve, pressure gage, safety rupture disc, internal thermocouple and external thermocouple in addition to the internal stirrer.

The mounting is on base plate with four buffers to take vibrations at high RPM

The heavy duty base allows to use various options like BPR, condenser, cooling coil etc.

Model Number	BT-SR2020	BT-SR2520	BT-SR2540	BT-SR2565	BT-SR2580
Volume mL	100 mL	160 mL	300 mL	500 mL	600 mL

Maximum Pressure	3000 psig (200 Bar)				
Maximum Temperature	350 Deg Centigrade				
Temperature Sensor	Type K Thermocouple				
Vessel Internal Dia.	50 mm	64 mm	64 mm	64 mm	64 mm
Vessel Internal Depth	50 mm	50 mm	100 mm	160 mm	190 mm
Closure	Split ring with PTFE gasket (Six 3/8” UNF compression bolts)				
Motor	Variable speed DC motor 90 watt 0~ 3000 RPM				
Magnetic Drive	16 KgF-Cm torque with belt drive for 0-2000 RPM				
Impeller 4 blade Dia.	31 mm	39 mm	39 mm	39 mm	39 mm
Internal Cooling	Not Available		Cooling Loop Option		
Valve	Swagelok 1/8” NPT , outlet 0.25 inch tube adaptor Gas inlet, Liquid sampling, gas vent				
Pressure Gauge	0~3000psig/200Bar,100 mm dia				
Heater	450 W	450 W	600 W	850 W	850 W
Controller	Programmable temperature control with DC-SSR, RPM control with DC regulated power supply, over temperature safety cut-off. Display of Reactor temperature, RPM, heater temperature, Option for Pressure display				
Power	230 V 50 Hz.1 Phase				