

Series Number:

4520

Type:
General Purpose

Stand:
Bench Top

Mounting Style:
Moveable or Fixed Head

Vessel Sizes, mL:
1000-2000
970-1900 HP

Standard Pressure
MAWP Rating, psi (bar):
1900 (131)

Standard Maximum
Operating Temp., °C:
225 w/ FKM O-ring
300 w/ FFKM O-ring
350 w/ PTFE Flat Gasket

High Pressure (HP)
MAWP Rating, psi (bar):
2900 (200)

Maximum Operating
Temperature, °C, at
High Pressure (HP):
350 @ 2900 psi

Series 4520 Bench Top Reactors, 1 & 2 L

These are the largest of the Parr Reactors that can be handled on a bench top.

These reactors are available with an FKM O-ring seal for operating temperatures to 225 °C, and FFKM O-ring for temperatures to 300 °C, or with a flat, PTFE gasket for operating temperatures up to 350 °C maximum.

An optional HP (High Pressure) flat gasket version has been added for maximum allowable working pressure of 2900 psi (200 bar) at 350 °C. Both fixed head and moveable vessel designs are available. An optional pneumatic lift is available for the heavier 2 liter cylinder and heater. It should be noted, however, that the 2 liter, fixed head model is tall and may not be convenient to operate on a standard height bench top. We recommend using a floor stand. (See Series 4530)

With their 4-inch internal diameter, these mid-size reactors have sufficient space for special modifications, such as an internal cooling coil, bottom drain valve (not on 2 liter bench top), ball valve for a solids

charging port, catalyst addition devices, condensers, electrical feed-throughs and more. Details are provided in Chapter 7 of this catalog, starting on page 115.

The standard magnetic stirrer drive on these 4520 Models works well for reaction mixtures

with viscosities up to 25,000 centipoise. For heavier stirring loads, these reactors can be equipped with larger magnetic drives, more powerful motors, and drive trains capable of delivering additional stirring torque.



Model 4523 Bench Top Reactor, 1000 mL, Fixed Head, open to show Internal Fittings, and a 4848 Controller shown with optional Expansion Modules.

4520

Series 4520 Pressure Reactor System Specifications				
Shaded bar indicates specifications that change within series.				
Model Number	4523	4524	4525	4526
Approximate Volume, mL	1000	2000	1000	2000
Approximate Volume for HP Models, mL	970	1900	970	1900
Maximum Pressure (MAWP)	1900 psi (131 bar)			
HP Maximum Pressure (MAWP)	2900 psi (200 bar)			
Maximum Temperature				
with FKM O-ring	225 °C			
with FFKM O-ring	300 °C			
with PTFE Flat Gasket	350 °C			
Reactor Details				
Mounting Style	Fixed Head		Moveable	
Stand Type	Bench Top			
Closure	Split-Ring (6 Compression Bolts for Flat Gasket, no Compression Bolts for O-ring)			
High Pressure Closure	Split-Ring (12 Compression Bolts for Flat Gasket, no Compression Bolts for O-ring)			
Valve Connections	1/8" Male NPT			
Magnetic Stirrer, Model No.	A1120HC6 General Purpose or A2140HC Footless			
Maximum Torque	16 Inch-Pounds			
Impeller(s), 6 blades	2 (2.28" dia. / HP: 2.00" dia.)			
Stirrer Motor	1/8 hp variable speed			
Pressure Gage, Size	4.5 inches			
Range	0-2000 psi (138 bar) / HP: 0-3000 psi (207 bar)			
Temperature Measurement	Thermowell			
Cooling Coil (optional)	Serpentine			
Bottom Drain Valve (BDV) (optional)				
Standard Pressure (1900 psi)	3/8" NPT	N/A	3/8" NPT	N/A
High Pressure (2900 psi)	1/4" NPT		1/4" NPT	
Lift Mechanism (optional)	Pneumatic		N/A	
Heater Style	Calrod			
Heater Power, Watts	1000 / 1500	1500 / 2000	1000 / 1500	1500 / 2000
Electrical Supply				
Volts, AC	115 / 230			
Maximum Load, amps, 115 / 230	12 / 9			
Cylinder Dimensions				
I.D. x Depth, inches	4.0 x 5.4	4.0 x 10.5	4.0 x 5.4	4.0 x 10.5
I.D. x Depth, inches for HP	3.75 x 5.4	3.75 x 10.5	3.75 x 5.4	3.75 x 10.5
Vessel Assembly Weight, pounds	33	38	30	36
Vessel Assembly Weight for HP, pounds	36	44	35	43
Cylinder Weight, pounds	8.9	13.7	8.9	13.7
Cylinder Weight for HP, pounds	11.3	18.4	11.3	18.4
Reactor Dimensions				
Width x Depth w/o Controller, inches	17 x 24			
Height, inches	38 (48 with BDV)	48	38 (48 with BDV)	48
Weight, pounds	105	120	100	115
Spare Parts Kit	4529M			
Other options available. See Ordering Guide, visit www.parrinst.com , or call for more information. Weights and dimensions are estimated from the base model. Final weights and dimensions will vary based on options selected.				