

Series Number:

4740

Type:
**High Pressure /
High Temperature**

Vessel Mounting:
Moveable

Vessel Sizes, mL:
25 & 75

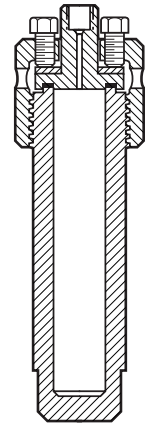
Maximum Pressure
MAWP Rating, psi (bar):
8500 (586)

Maximum Operating
Temp., °C:
538

Series 4740 HP/HT Pressure Vessels, 25 & 75 mL

These high pressure/high temperature pressure vessels have a 1-inch. They have a 1-inch inside diameter and offer volumes of 25 or 75 mL. These vessels are closed with an alloy steel screw cap which includes six compression bolts to develop the sealing force on a flat, flexible graphite gasket. Interchangeable PTFE gaskets are also available for users who need the high pressure capabilities provided by these vessels, but who do not need to operate above 350 °C. Maximum pressure drops quickly at temperatures above 350 °C to a rating of 1850 psi (125 bar) at 538 °C. These vessels are available in all of the standard materials currently offered by Parr, although some of these materials will limit the maximum pressures and temperatures available.

The head of these vessels can only accommodate one opening. It is designed to accept the 4310A Gage Block Assembly which can be furnished with or without a thermocouple. Parr offers the 4921 Bench Top Ceramic Fiber heater for use with the 75 mL, 4740 Vessel only. The smaller 25 mL Vessels are generally heated in an oven, bath, furnace or similar general purpose heater (not available from Parr)



4740-75 mL Cross Section

Series 4740 Pressure Vessel Specifications

Shaded bar indicates specifications that change within series.

Approximate Volume, mL	25	75
Maximum Pressure		
Head & Cylinder of T316SS With Standard Screw Cap	8500 psi (586 bar) @ 350 °C 4100 psi (282 bar) @ 500 °C 1850 psi (127 bar) @ 538 °C	
Head & Cylinder of T316SS With Alloy C-276 Screw Cap	8500 psi (586 bar) @ 350 °C 8000 psi (551 bar) @ 500 °C 7900 psi (544 bar) @ 538 °C	
Maximum Temperature		
With PTFE Flat Gasket	350 °C	
With Flexible Graphite Flat Gasket	500-538 °C	
Vessel Details		
Mounting Style	Moveable	
Closure	Screw Cap (6 Compression Bolts)	
Head Seal	Flat Gasket	
Head Opening Options	One head opening (“A” socket, or rupture disc assembly port) Custom port option (Contact our technical sales department to discuss options)	
Maximum Head Opening	1	
Temperature Measurement (Optional)	Thermocouple (in cylinder bottom or in optional gage block assembly)	
Stand and Heater (optional)		
Stand type	N/A	Bench Top Stand with Heater
Heater Style		Ceramic Fiber
Heater Power, Watts		700
Maximum Load, amps, 115V / 230V		6 / 3
Weight and Dimensions		
Cylinder I.D. x Depth, inches	1.0 x 1.7	1.0 x 5.6
Vessel Assembly Weight, pounds*	4	6
Cylinder Weight, pounds	1.4	3.2
*Vessel weight is based on a moveable head vessel with a plugged “A” socket. Vessel weight will vary based on head configuration choice and fitting options.		
Other options available. See Ordering Guide, visit www.parrinst.com , or call for more information.		

Series 4740 Ordering Guide



Model 4740-75mL-A
Vessel, with
4310 Gage Block
Assembly.



Model 4740-75mL Vessel, with
bench top stand and Ceramic
Fiber Heater (-BTS).

An example order number for a vessel in this series is:

4740-75mL-FG-SS-A

A composite identification number to be used when ordering a 4740 Series Pressure Vessel System can be developed by combining individual symbols from the separate sections below. For more information on how to use this ordering guide, [please see page 27](#).

A Vessel Volume

-25mL	25 mL, 1" ID
-75mL	75 mL, 1" ID

B Gasket / Maximum Temperature

-T	PTFE Gasket, 350 °C
-FG	Flexible Graphite Flat Gasket, 500-538 °C

C Materials of Construction

-SS	T316 Stainless Steel
-C20	Alloy 20
-M0	Alloy 400
-IN600	Alloy 600
-IN625	Alloy 625
-HB	Alloy B-2 / B-3
-HC	Alloy C-276
-NI	Nickel 200*
-TI2	Titanium Grade 2*
-TI4	Titanium Grade 4*
-ZR702	Zirconium Grade 702*
-ZR705	Zirconium Grade 705*

* Maximum temperature and/or pressure limited
See [page 10](#) or [page 24](#) for complete list of available alloys.

D Head Configuration

-RD	Rupture disc port with rupture disc assembly & disc
-A	One head opening, "A" socket
-NS	Non-standard, custom head opening

E Optional Fittings & Custom Options (Check all needed)

-HCSC	Alloy C-276 Screw Cap for HPHT
-TC	Thermocouple (in cylinder bottom)
-4310A	Gage block assembly (for head with "A" socket opening)
-4310ATC	Gage block assembly with thermocouple (for head with "A" socket opening)

F Pressure Gage Option

-No Symbol	None
-10,000	10,000 psi / 690 bar
-7500	7500 psi / 517 bar
-5000	5000 psi / 345 bar
-3000	3000 psi / 207 bar
-2000	2000 psi / 138 bar

Please note that all options and combinations are not compatible with all models.

G Stand with Heater Options

-No Symbol	None
-BTS	Ceramic Fiber Heater w/Stand, 700W

H Controller

-No Symbol	None
-4838	PID Control, Ramp & Soak Programming, and Data logging with Software (RS-485 to USB cable not included). For use with one additional display module.
-4848	PID Control, Ramp & Soak Programming, and Data logging with Software. (RS-485 to USB cable not included). For use with up to three additional display modules.

See [Chapter 6](#) for complete list of Controller options.

I Controller Options (Check all needed)

-PDM	Pressure Display Module
-HTM	High Temperature Cut Off Module
-ETLM	External Temperature Limit Module
-SVM	Solenoid Valve Module (for cooling control)
-A1925E4	RS-485 to USB Cable for 4838/4848 Controller (required for data logging)
-A1925E6	RS-485 to USB Converter, isolated, 30-ft
-A2208E	RS-485 Daisy Chain for Multiple Controllers (Must be used with A1925E6)
-A3504HC	SpecView Software Package for 4838/4848 Controller

J Electrical Supply for Heater and/or Controller

-No Symbol	None
-115	115V Power
-230	230V Power

K Certifications

-ASME	ASME Documentation
-CE	CE Documentation
-P	Parr Certification

Please note that all options and combinations are not compatible with all models.