

## Pharmaceutical/Hygienic Vessels

### Custom Crafted Quality to Fit Every Pressure, Processing and Storage Need

**PORTABLE PRESSURE VESSELS** Custom designed specifically for your application, APC pharmaceutical/hygienic portable pressure vessels are available in 9", 12" or 18" (229, 305, or 458mm) diameters, with a total volume range of from 3.8 to 142.1 liters (1 to 37.4 gallons).

**PRESSURE RATING** Rated for full vacuum, every APC pharmaceutical/hygienic portable pressure and process vessel meets the ASME "U" or "UM" Code Section VIII, Division 1. The maximum allowable



working pressure of each vessel varies depending on the vessel's diameter.

**CONSTRUCTION MATERIALS** Your APC pharmaceutical/hygienic portable pressure vessel can be constructed from a variety of materials, including:

- Type 304L, 316L or 317L low-carbon-grade stainless steel
- Type 304, 316 or 317 stainless steel
- Higher alloys such as Hastelloy, Monel or Duplex

For most applications, Type 316L low-carbon stainless steel is the material of choice in the product contact area. Low-carbon stainless steel eliminates sensitization or carbide precipitation in the vessel's weld areas, and it reduces the formation of chromium carbide, which can deplete chromium from the weld areas and expose them to corrosion. A stainless steel rich in chromium provides maximum passivity.

We can assist you in selecting the appropriate material for your particular vessel and application.

**FITTINGS & ACCESSORIES** APC vessels can be equipped with virtually any fitting or accessory your application or process requires, including:

- Mixers
- Sight glasses
- Level gauges
- Manways
- Sanitary pressure relief valves and gauges, and more

Vessel fittings are sanitary-clamp type or equivalent in order to CIP or SIP, with the length-to-diameter ratio of each fitting not exceeding 2.0 whenever feasible. All fittings and accessories are located in positions that enhance vessel cleanability and sterility.



"Craftsmanship is my ability to take a print and make my job look like the print. It's a learning process. It's not something that you're given. It's learned. And it takes years."

Roger Sullivan  
Machinist  
27 years with  
Alloy Products

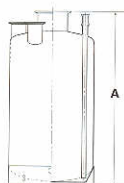
**PROTECTIVE SKIRTS** In addition to giving your vessel a sure, solid footing, protective skirts help prevent vessel damage during transport.

- Impact-resistant rubber or stainless steel skirts are available on 9'- and 12"-diameter portable pressure vessels.
- Rugged reinforced stainless-steel skirts are standard on 18"-diameter portable pressure vessels.



**9" ID SPECIFICATIONS**

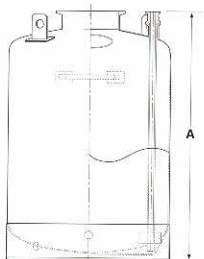
CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
124-01	3.8	1	216.0	8 <sup>1</sup> / <sub>2</sub>	4.5	10
124-02	7.6	2	295.2	11 <sup>5</sup> / <sub>8</sub>	6.0	13
124-03	11.4	3	387.3	15 <sup>1</sup> / <sub>4</sub>	7.0	15
124-04	15.2	4	479.4	18 <sup>7</sup> / <sub>8</sub>	8.2	18
124-05**	19.0	5	571.5	22 <sup>1</sup> / <sub>2</sub>	9.1	20
124-06	22.8	6	664.0	26 <sup>1</sup> / <sub>8</sub>	10.4	23
124-07	26.6	7	756.0	29 <sup>3</sup> / <sub>4</sub>	12.0	26


**12" ID SPECIFICATIONS**

CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
126-06	22.8	6	429.0	16 <sup>7</sup> / <sub>8</sub>	12.0	26
126-07	26.5	7	481.0	18 <sup>15</sup> / <sub>16</sub>	13.0	28
126-08	30.4	8	535.0	21 <sup>1</sup> / <sub>16</sub>	14.0	30
126-09	34.2	9	587.4	23 <sup>1</sup> / <sub>8</sub>	14.5	32
126-10	37.8	10	643.0	25 <sup>5</sup> / <sub>16</sub>	15.4	34
126-11	41.8	11	692.1	27 <sup>1</sup> / <sub>4</sub>	16.3	36
126-12	45.6	12	745.0	29 <sup>5</sup> / <sub>16</sub>	17.2	38
126-13	49.4	13	797.0	31 <sup>3</sup> / <sub>8</sub>	18.1	40
126-14	53.2	14	848.0	33 <sup>3</sup> / <sub>8</sub>	19.0	42
126-15	57.0	15	900.0	35 <sup>7</sup> / <sub>16</sub>	20.0	44
126-16	60.8	16	952.0	37 <sup>1</sup> / <sub>2</sub>	21.0	46


**18" OD SPECIFICATIONS**

CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
128-20	75.7	20	597.0	23 <sup>1</sup> / <sub>2</sub>	41.0	90
128-25	94.6	25	718.0	28 <sup>3</sup> / <sub>4</sub>	45.4	100
128-30	113.5	30	839.0	33 <sup>3</sup> / <sub>32</sub>	50.0	110
128-35	132.5	35	960.4	37 <sup>11</sup> / <sub>16</sub>	54.4	120
128-37.4	141.5	37.4	1018.4	40 <sup>7</sup> / <sub>32</sub>	57.0	125



\* The overall height (A dimension) may vary depending on size and type of fittings required.

\*\* Indicates stock vessels.

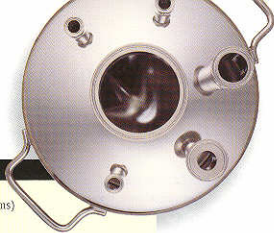


## MATERIAL SPECIFICATIONS

Capacity:	3.8 to 26.6 liters (1 to 7 gallons)
Material:	T-316L standard. Other materials available.
Inside Diameter:	229mm (9")
Sanitary Fittings:	Size, type and quantity optional.
Skirt:	Rubber. Stainless optional.
Maximum Working Pressure:	11 bar @ 37.8°C (160 psi @ 100°F)
Surface Finish:	240 grit I.D. (8-12 Ra) and electropolished. Other finishes available.

Capacity:	22.8 to 60.8 liters (6 to 16 gallons)
Material:	T-316L standard. Other materials available.
Inside Diameter:	305mm (12")
Sanitary Fittings:	Size, type and quantity optional.
Skirt:	Rubber. Stainless optional.
Maximum Working Pressure:	14 bar @ 37.8°C (200 psi @ 100°F)
Surface Finish:	240 grit I.D. (8-12 Ra) and electropolished. Other finishes available.

Capacity:	76 to 142.1 liters (20 to 37.4 gallons)
Material:	T-316L standard. Other materials available.
Outside Diameter:	458mm (18")
Sanitary Fittings:	Size, type and quantity optional.
Skirt:	Stainless
Maximum Working Pressure:	9.5 bar @ 37.8°C (140 psi @ 100°F)
Surface Finish:	240 grit I.D. (8-12 Ra) and electropolished. Other finishes available.





## Pharmaceutical/Hygienic Vessels Process Vessels, Storage Vessels, and Dimpled Heat Transfer Vessels

**PORTABLE PROCESS VESSELS** Custom designed specifically for your process to ensure maximum cleanability, releasability and hygiene, APC pharmaceutical process vessels have volumes ranging from 3.8 to 1135 liters (1 to 300 gallons), and outside diameters ranging from 203 to 1219 mm (8 to 48 inches).

APC process vessels are available with the same pressure ratings and fitting, accessory and construction material options as our portable pressure vessels. Specific diameters and sidewall configurations can be selected to optimize your process and minimize your costs.

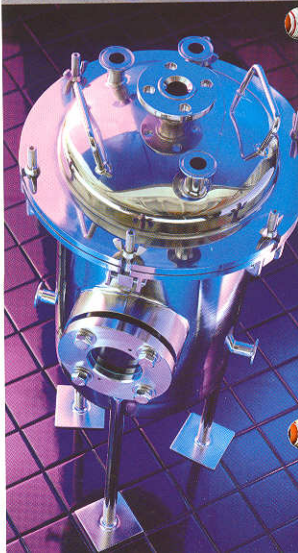
In addition, a full baffled jacket or a full dimpled side jacket and bottom head can be specified to maximize your vessel's heat transfer capabilities, with optional Thermolux paint and chloride-free insulation to help reduce stress cracking and corrosion. A shroud of Type 304 or other stainless steel can be used to cover the insulation.

**PORTABLE STORAGE VESSELS** Ranging in volume from 3.8 to 1135 liters (1 to 300 gallons), with outside diameters from 229 to 914 mm (9 to 36 inches), APC portable storage vessels are available with the same fitting, accessory and construction material options as our portable pressure vessels.

**DIMPLED HEAT TRANSFER PRESSURE VESSELS** Adding a full dimpled stainless steel jacket and bottom head to your APC pressure vessel increases heat flow in the passages created to maximize the vessel's ability to transfer heat.

Available in volumes from 7.6 to 1135 liters (2 to 300 gallons), dimpled heat transfer pressure vessels range in diameter from 229 to 914 mm (9 to 36 inches). (Insulation and a stainless steel shroud, if required, add approximately 2 inches to the vessel's diameter.)

Dimpled heat transfer jackets are generally made from 304 stainless. Thermolux paint and chloride-free insulation help to eliminate vessel corrosion and stress cracking. Special vessel sizes, fittings, accessories and polishes are also available.



**Storing...Mixing...Dispensing...CIP**  
**Every Hygienic Vessel to Meet Your Needs**  
**In Sizes up to 300 Gallons**

PHARMACEUTICAL/HYGIENIC

