

## UN Portable Stainless Steel Pressure Vessels

### Globe-Trotting Pressure Vessels

### Tough Enough to Meet Both UN and APC Standards

Rugged Alloy Products UN pressure vessels are designed and built to perform reliably for the world's most demanding users, in challenging transport situations around the globe. They live up to rigorous United Nations standards and Alloy Products' reputation for quality and long life. All APC vessels' pressure ratings and temperatures are designated in psi/bar and Fahrenheit/Centigrade.

**STOCK UN VESSELS** The UN certification test of reusable non-bulk packaging is so stringent, it is recognized worldwide as a performance standard (replacing D.O.T.5A certification).

Alloy Products responds to your demand for these versatile vessels with a large inventory of pre-tested, in-stock 5-gallon and 55-gallon models. Many customers prefer using stock sizes to save the cost of testing to UN standards.

**CUSTOM UN VESSELS** Ranging in size from one gallon up to 119 gallons, Alloy Products' custom-made non-bulk packaging UN vessels let you precisely match your vessel to a particular need. Customized vessel attributes — such as fitting size, style and location — can also be specified. Each new custom-designed vessel must undergo the same UN certification testing, performed at customer expense, as our standard UN vessels.

**UN CERTIFICATION TESTING** Built in compliance with UN Tariff No. BOE-6000 (latest revision), all UN vessels manufactured by Alloy Products undergo the following tests:

- Drop Test Subpart M, Section 178.603
- Leak-Resistance Test Subpart M, Section 178.604
- Hydrostatic Test Subpart M, Section 178.605
- Stacking Test Subpart M, Section 178.606
- Vibration Test Subpart M, Section 178.608
- Periodic Retesting Subpart M, Section 178.601(e)

Customers must provide Alloy Products with the specific gravity of their product for the design phase, the proper shipping name of the chemical and/or the United Nations identification number of the product.



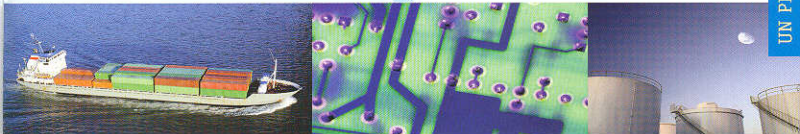
"We're always trying to improve on how we do things. Being ISO certified makes a big difference. We follow certain procedures. We check parts more frequently. We require our vendors to be certified. We also ask our people how we can improve. It all makes for a better quality product."

Ron Tread  
Production Control  
Manager  
25 years with  
Alloy Products



For initial design qualification, six samples of all new UN pressure vessel designs must be tested on the initial production run before use. Periodic retests are then required on two samples from subsequent production runs at least once every 12 months from the date of the original design qualification.

Thanks to the rugged construction of our tanks, Alloy Products has been certified to ship pressure vessels into the People's Republic of China. In addition, all Alloy Products vessels also fully comply with the requirements of the American Society of Mechanical Engineers (ASME) for Unfired Pressure Vessels, Section VIII, Division 1.



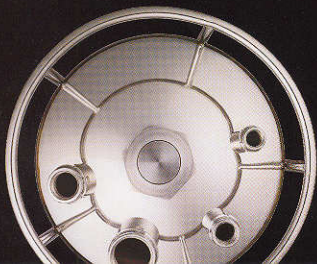
**CLOSURE OPTIONS** A choice of several different types of closures adds flexibility to your UN vessel's use.

- Standard nipple-type closures
- NPT-type closures
- Flange closures
- Sanitary clamp closures
- VCR closures


**PROTECTIVE SKIRTS & CHIMES** Added features provide sturdy, stable footing for your UN vessel, and protect it against harsh environments and the rigors of frequent transport.

- Impact-resistant rubber skirts are standard on 9"- and 12"-diameter UN vessels.
- Stainless-steel skirts are standard on 18"- and 24"-diameter UN vessels, and optional on 9"- and 12"-diameter vessels.
- Ring chimes make it easier to transport vessels and protect fittings and other components during vessel shipment and use.
- Built-in skids simplify the transport of 55-gallon UN vessels.





## MATERIAL SPECIFICATIONS



Capacity:	3.8 to 26.6 liters (1 to 7 gallons)
Material:	T-304 standard. Other materials available.
Inside Diameter:	229mm (9")
Fittings:	Four 1/4"-18 NPT female pipe fittings in top head.
Skirt:	Rubber. Stainless optional.
Maximum Working Pressure:	12 bar @ 37.8°C (175 psi @ 100°F) for T-304 10.5 bar @ 37.8°C (155 psi @ 100°F) for T-316L
Surface Finish:	White pickle or electropolish. Other finishes available.

Capacity:	22.8 to 60.8 liters (6 to 16 gallons)
Material:	T-304 standard. Other materials available.
Inside Diameter:	305mm (12")
Fittings:	Four 1/4"-18 NPT female pipe fittings in top head.
Skirt:	Rubber. Stainless optional.
Maximum Working Pressure:	10.9 bar @ 37.8°C (160 psi @ 100°F) for T-304 11.2 bar @ 37.8°C (165 psi @ 100°F) for T-316L
Surface Finish:	White pickle or electropolish. Other finishes available.

Capacity:	76 to 142.1 liters (20 to 37.4 gallons)
Material:	T-304 or T-316L standard.
Outside Diameter:	458mm (18")
Fittings:	Four 1/4"-18 NPT female pipe fittings in top head.
Skirt:	Stainless
Maximum Working Pressure:	6.8 bar @ 37.8°C (100 psi @ 100°F) for T-304 6 bar @ 37.8°C (90 psi @ 100°F) for T-316L
Surface Finish:	White pickle or electropolish. Other finishes available.

Capacity:	209 liters (55 gallons)
Material:	T-316L standard. Other materials available.
Outside Diameter:	610mm (24")
Fittings:	Four 1/4"-18 NPT female pipe fittings in top head.
Skirt:	Stainless
Maximum Working Pressure:	72 psi @ 100°F for T-316L
Surface Finish:	White pickle or electropolish. Other finishes available.



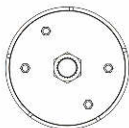
## PRESSURE RATINGS / 9" ID

TYPE OF STAINLESS STEEL	MAXIMUM OPERATING TEMPERATURE		MAXIMUM ALLOWABLE PRESSURE	
	F	C	PSI	BAR
Type 304	100	37.8	175	12.1
	150	65.5	170	11.7
	200	93.3	165	11.4
	250	121.1	160	11.0
	300	148.8	155	10.7
Type 316L	100	37.8	155	10.7
	150	65.5	155	10.7
	200	93.3	155	10.7
	250	121.1	155	10.7
	300	148.8	150	10.3



## PRESSURE RATINGS / 12" ID

TYPE OF STAINLESS STEEL	MAXIMUM OPERATING TEMPERATURE		MAXIMUM ALLOWABLE PRESSURE	
	F	C	PSI	BAR
Type 304	100	37.8	160	11
	150	65.5	160	11
	200	93.3	160	11
	250	121.1	155	10.7
	300	148.8	150	10.3
Type 316L	100	37.8	165	11.4
	150	65.5	165	11.4
	200	93.3	165	11.4
	250	121.1	165	11.4
	300	148.8	165	11.4



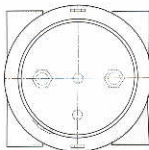
## PRESSURE RATINGS / 18" OD

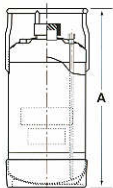
TYPE OF STAINLESS STEEL	MAXIMUM OPERATING TEMPERATURE		MAXIMUM ALLOWABLE PRESSURE	
	F	C	PSI	BAR
Type 304	100	37.8	100	6.8
	150	65.5	97	6.6
	200	93.3	95	6.5
	250	121.1	91	6.2
	300	148.8	88	6.0
Type 316L	100	37.8	90	6.2
	150	65.5	90	6.2
	200	93.3	90	6.2
	250	121.1	90	6.2
	300	148.8	86	5.9



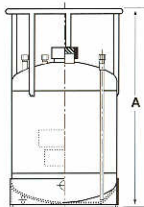
## PRESSURE RATINGS / 24" OD

TYPE OF STAINLESS STEEL	MAXIMUM OPERATING TEMPERATURE		MAXIMUM ALLOWABLE PRESSURE	
	F	C	PSI	BAR
Type 304	100	37.8	130	8.9
	150	65.5	130	8.9
	200	93.3	120	8.3
	250	121.1	120	8.3
	300	148.8	115	7.9
Type 316L	100	37.8	115	7.9
	150	65.5	115	7.9
	200	93.3	115	7.9
	250	121.1	115	7.9
	300	148.8	110	7.6

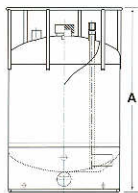


**9" ID SPECIFICATIONS**

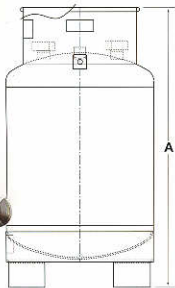
CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
82-01	3.8	1	273	10.75	4.5	10
82-02	7.6	2	340	13.38	6.0	13
82-03	11.4	3	432	17.00	7.0	15
82-04	15.2	4	524	20.62	8.2	18
82-05**	19.0	5	616	24.25	9.1	20
82-06	22.8	6	708	27.88	10.4	23
82-07	26.6	7	800	31.50	12.0	26

**12" ID SPECIFICATIONS**

CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
84-06	22.8	6	545	21.44	13.1	29
84-07	26.5	7	598	23.53	14.0	31
84-08	30.4	8	652	25.66	15.0	33
84-09	34.2	9	703	27.68	15.8	35
84-10	37.8	10	756	29.75	16.8	37
84-11	41.8	11	808	31.81	17.7	39
84-12	45.6	12	860	33.87	18.6	41
84-13	49.4	13	912	35.94	19.5	43
84-14	53.2	14	965	38.00	20.4	45
84-15	57.0	15	1018	40.06	21.3	47
84-16	60.8	16	1070	42.12	22.2	49

**18" OD SPECIFICATIONS**

CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
86-20	75.7	20	677	26.66	42.6	94
86-25	94.6	25	799	31.44	47.1	104
86-30	113.5	30	919	36.19	51.6	114
86-35	132.5	35	1041	40.97	56.2	124
86-37.4	141.5	37.4	1099	43.25	58.4	129

**24" OD SPECIFICATIONS**

CATALOG NUMBER	CAPACITY		"A" DIMENSION HEIGHT*		APPROXIMATE SHIPPING WEIGHT	
	LITERS	GALLONS	MM	INCHES	KG	LBS
88-55**	209	55	1141	44.93	230	165

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

\*\* Indicates stock vessels.