

For Ammonia (R717) and Other Refrigerants

FEATURES

- **ASME Certified:** Vessels are designed, fabricated, tested, inspected, and stamped in accordance with ASME Boiler and Pressure Vessel Code Section VIII, Division I, and registered with the National Board of Boiler and Pressure Vessel inspectors.
- **Shells:** Shells 24" diameter and smaller are SA106 Gr. S/B. SA53 Gr. S/B or SA53 Gr. E/B pipe. Shells larger than 24" diameter are rolled SA516-70 carbon steel plate.
- **Heads:** Standard heads are ASME Code 2:1 semi-elliptical SA516-70N (normalized) carbon steel.
- **Nozzles:** Standard pipe nozzles are ASTM A-53 Grade B and ASTM 106 Grade B. Standard nozzle couplings are SA105 Class 3000.
- **MAWP:** Standard vessel ratings are 250PSI or 300PSI depending on customer's Code requirements. Please specify rating requirement when requesting a quote/placing an order.
- **Test Pressure:** Phillips hydrostatically tests all pressure vessels at 1.5 times MAWP which exceeds ASME Code requirement of 1.3 times MAWP minimum.
- **Supports:** Vertical vessels are supported with structural angle iron legs. Horizontal vessels are supported with structural 120° saddles welded to the vessel shell. All vessels 30" diameter and larger are supplied with lifting lugs.

DESCRIPTION

Receivers function as a reservoir for liquid refrigerant. They should be sized to accommodate all of the refrigerant in the system, with 20% volume available for vapor space at the highest anticipated liquid level to allow for liquid expansion. A reserve of liquid refrigerant should always prevail in the receiver during operation.

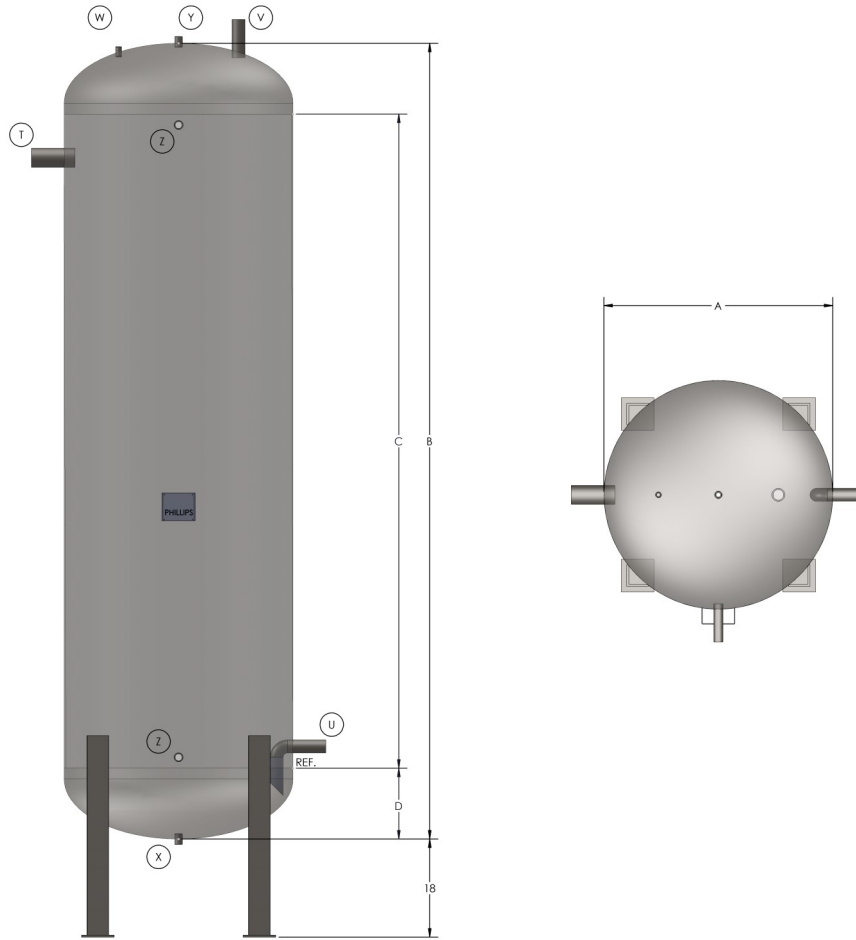
OPTIONS

- **Level Column:** Phillips can provide an external level column complete with Phillips Level Eyes® to allow for visual verification of liquid level inside the vessel, and a factory mounted drain valve.
- **Valve Package:** Isolation valves for the inlet, outlet, equalizer, drain, purge, and level column connections can be provided factory installed. Properly sized pressure relief valves are provided as ship-loose items.
- **Radiography:** Vessel welds are x-rayed by request, when required by Code, or when use of x-rays can allow a thinner-walled vessel.
- **PWHT:** Vessels can be provided with Post-Weld Heat Treatment including post-oven sandblasting to remove external scale.
- **Stainless Steel:** Fabrication with stainless steel heads, shell, and nozzles
- **Special Coatings:** Non-standard coatings/colors are available including Safety Orange.
- **Alternate Pressure Ratings:** Higher pressure ratings are possible to meet the requirements of the refrigerant being stored.



ENGINEERING DATA

VERTICAL HIGH PRESSURE RECEIVERS

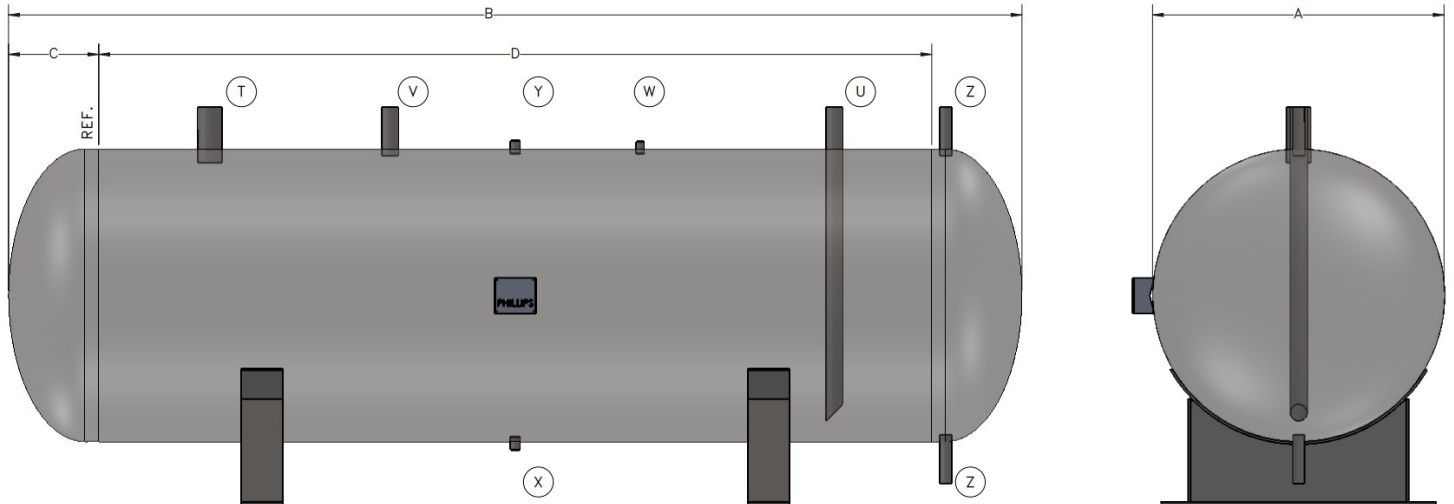


Model No.	A	B	C	D	T	U	V	W	X	Y	Z	Gross Volume (cu.ft.)	Shipping Weight (Lbs)
	Dia.	OAL	Head	Shell	Liquid Inlet	Liquid Outlet	Equal	Purge	Drain	Relief	Column (Qty 2)		
HPRV-20111	20	111	7½	96	1¼	¾	¾	¾	¾	¾	1¼	17.9	590
HPRV-20135	20	135	7½	120	1¼	1	1	¾	¾	¾	1¼	22.0	690
HPRV-20207	20	207	7½	192	1½	1	1	¾	¾	¾	1¼	34.1	1020
HPRV-24137	24	137	8½	120	1½	1¼	1¼	¾	¾	¾	1¼	32.4	1210
HPRV-24209	24	209	8½	192	2	1¼	1¼	¾	¾	¾	1¼	50.1	1780
HPRV-30140	30	140	10	120	2½	1½	1½	¾	¾	¾	1¼	52.0	1590
HPRV-30212	30	212	10	192	2½	1½	2	¾	¾	¾	1¼	80.0	2310
HPRV-36143	36	143	11½	120	2½	1½	1½	¾	¾	¾	1¼	76.7	1940
HPRV-36215	36	215	11½	192	3	2	2	¾	¾	¾	1¼	117	2810
HPRV-42146	42	146	13	120	3	2	2	¾	¾	¾	1¼	107	2360
HPRV-42218	42	218	13	192	3	2	2	¾	¾	¾	1¼	162	3370
HPRV-48149	48	149	14½	120	3	2	2	¾	1	¾	1¼	140	2750
HPRV-48221	48	221	14½	192	3	2	2	¾	1	¾	1¼	213	3910
HPRV-54152	54	152	16	120	3	2	2	¾	1	¾	1¼	181	4140
HPRV-54224	54	224	16	192	4	2½	2½	¾	1	¾	1¼	273	5880
HPRV-60155	60	155	17½	120	4	2½	2½	¾	1	¾	1¼	225	4750
HPRV-60227	60	227	17½	192	4	3	3	¾	1	¾	1¼	338	6680
HPRV-72161	72	161	20½	120	4	3	3	¾	1	¾	1¼	333	7550
HPRV-72233	72	233	20½	192	4	3	3	¾	1	1	1¼	496	10440
HPRV-84167	84	167	23½	120	4	3	3	¾	1	¾	1¼	466	9250
HPRV-84239	84	239	23½	192	5	4	4	¾	1	1	1¼	687	12630
HPRV-84287	84	287	23½	240	6	5	5	¾	1	1¼	1¼	835	14890
HPRV-96173	96	173	26½	120	6	5	5	¾	1	1	1¼	627	13420
HPRV-96245	96	245	26½	192	8	5	5	¾	1	1¼	1¼	918	18050
HPRV-96293	96	293	26½	240	8	5	5	¾	1	1¼	1¼	1110	21130



ENGINEERING DATA

HORIZONTAL HIGH PRESSURE RECEIVERS



Model No.	A	B	C	D	T	U	V	W	X	Y	Z	Gross Volume (cu.ft.)	Shipping Weight (LBS)
	Dia.	OAL	Head	Shell	Liquid Inlet	Liquid Outlet	Equal	Purge	Drain	Relief	Column (Qty 2)		
HPRV-20111	20	111	7½	96	1¼	¾	¾	¾	¾	¾	1¼	17.9	590
HPRV-20135	20	135	7½	120	1¼	1	1	¾	¾	¾	1¼	22.0	690
HPRV-20207	20	207	7½	192	1½	1	1	¾	¾	¾	1¼	34.1	1020
HPRV-24137	24	137	8½	120	1½	1¼	1¼	¾	¾	¾	1¼	32.4	1210
HPRV-24209	24	209	8½	192	2	1¼	1¼	¾	¾	¾	1¼	50.1	1780
HPRV-30140	30	140	10	120	2½	1½	1½	¾	¾	¾	1¼	52.0	1590
HPRV-30212	30	212	10	192	2½	1½	2	¾	¾	¾	1¼	80.0	2310
HPRV-36143	36	143	11½	120	2½	1½	1½	¾	¾	¾	1¼	76.7	1940
HPRV-36215	36	215	11½	192	3	2	2	¾	¾	¾	1¼	117	2810
HPRV-42146	42	146	13	120	3	2	2	¾	¾	¾	1¼	107	2360
HPRV-42218	42	218	13	192	3	2	2	¾	¾	¾	1¼	162	3370
HPRV-48149	48	149	14½	120	3	2	2	¾	1	¾	1¼	140	2750
HPRV-48221	48	221	14½	192	3	2	2	¾	1	¾	1¼	213	3910
HPRV-54152	54	152	16	120	3	2	2	¾	1	¾	1¼	181	4140
HPRV-54224	54	224	16	192	4	2½	2½	¾	1	¾	1¼	273	5880
HPRV-60155	60	155	17½	120	4	2½	2½	¾	1	¾	1¼	225	4750
HPRV-60227	60	227	17½	192	4	3	3	¾	1	¾	1¼	338	6680
HPRV-72161	72	161	20½	120	4	3	3	¾	1	¾	1¼	333	7550
HPRV-72233	72	233	20½	192	4	3	3	¾	1	1	1¼	496	10440
HPRV-84167	84	167	23½	120	4	3	3	¾	1	¾	1¼	466	9250
HPRV-84239	84	239	23½	192	5	4	4	¾	1	1	1¼	687	12630
HPRV-84287	84	287	23½	240	6	5	5	¾	1	1¼	1¼	835	14890
HPRV-96173	96	173	26½	120	6	5	5	¾	1	1	1¼	627	13420
HPRV-96245	96	245	26½	192	8	5	5	¾	1	1¼	1¼	918	18050
HPRV-96293	96	293	26½	240	8	5	5	¾	1	1¼	1¼	1110	21130

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