



LARGE VOLUME HOT WATER STORAGE TANKS

Thermal Solutions offers many sizes and configurations of commercial large volume hot water storage tanks with options to meet today's domestic hot water system needs.

Tanks: **Vertical or Horizontal** - All carbon steel tanks are constructed and certified in accordance with ASME IV, Part HLW for maximum 180°F hot water temperature and 125 PSI working pressure (Optional 150 PSI available). Tank designs are also available in 316L or 2205 duplex stainless steel.

Interior: **Glass Lining** - The tank interior is a premium single glass enamel lining providing a rugged wear that minimizes the effects of high temperature hot water up to 180 degrees and has a minimum of 10 mils of finished glass. The glass enamel lining is tested under the following ASTM testing guidelines:

- **W-H-196 Test** - This test consists of exposing the enamel to a boiling (212°F) 4/10% solution of sodium Bicarbonate for (8) eight, (18) eighteen-hour cycles. Maximum weight loss after eight cycles is not to exceed 8 mg/in².
- **PEI T-21 Spot Acid Test** - This test is used to determine enamel resistance to acids. The test area is examined for visible effects on the enamel and is graded from Class AA (no sign of etching) to Class D (etched surface). Minimum grade shall be no less than A.
- **Impact resistance** - The impact resistance test is used to determine the adhesive qualities of enamel to the substrate. The enamel is graded from Class 1 (worst) to Class 5 (best), fractured glass adhering solidly to the impact area. Minimum Class shall be no less than 4.
- **Hi-Pot Test** - The HYPO test is a measurement of the continuity of the enamel coating (Spark Test). A maximum of Twenty (20) sparks shall be an acceptable count.

Optional interior linings include premium double glass enamel (min 20 mils) or epoxy.

Exterior: **Jacket & Insulation** - Factory installed heavy gauge steel jacket finished with a baked acrylic enamel finish. The storage tank is completely encased in a minimum of 2" thick, high density polyurethane foam insulation that minimizes heat loss with an R value of 12.5 and meets the energy efficiency requirements of the latest edition of the ASHRAE 90.1 Standard.

Bare - Red oxide primer with the option of providing a sprayed-on rigid insulation with acrylic topcoat that exceeds ASHRAE 90.1 requirements with 2.25" of high-density polyurethane foam with an "R" value of R-16.

Warranty: **Five year (Single Glass or Epoxy Lining) or Ten Year (Double Glass Lining) Limited Warranty** Against tank failure resulting from defects in materials and workmanship.

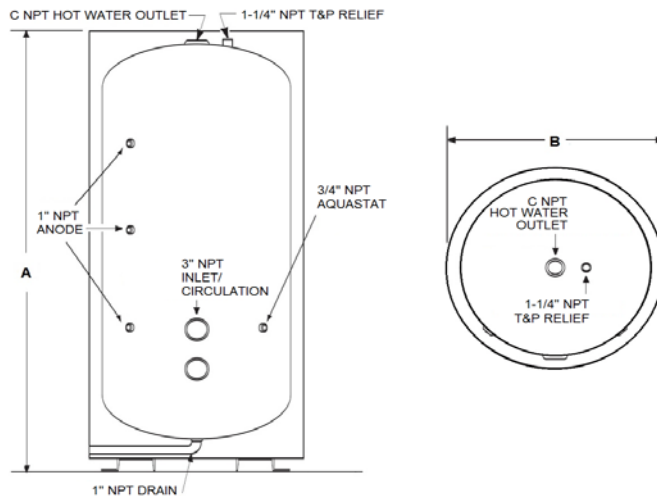
MODEL NOMENCLATURE						
TS	V	175	-	J	1	-
TS	Tank Configuration V=Vertical H=Horizontal	Gallons Actual		Exterior J=Jacketed & Insulated B=Bare T=Topcoat & Insulated	Interior Lining 1=10 Mils Glass 2=20 Mils Glass E=Epoxy S=Stainless	Options Blank=125 Psig Design 150=150 Psig Design 316=316L Stainless DSS=Duplex Stainless SPL=Special Build

Vertical, Jacketed and Insulated Large Volume Hot Water Storage Tanks

Model	Actual Gallons	Height (A)	Diameter (B)	Hot Water Outlet (C)	Drain	Inlet / Circulation	Base Clearance	125 PSI Approx. Ship Wgt
TSV175-J*	175	71"	34"	2-1/2" NPT	1" NPT	3" NPT	2"	550
TSV210-J*	210	83"	34"	2-1/2" NPT	1" NPT	3" NPT	2"	615
TSV240-J*	240	93"	34"	2-1/2" NPT	1" NPT	3" NPT	2"	675
TSV280-J*	280	107"	34"	2-1/2" NPT	1" NPT	3" NPT	2"	700
TSV320-J*	320	119"	34"	2-1/2" NPT	1" NPT	3" NPT	2"	730
TSV285-J*	285	80"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	715
TSV310-J*	310	86"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	785
TSV340-J*	340	93"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	845
TSV360-J*	360	98"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	895
TSV415-J*	415	110"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	985
TSV465-J*	465	122"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	1,110
TSV515-J*	515	134"	40"	2-1/2" NPT	1" NPT	3" NPT	2"	1,195
TSV435-J*	435	89"	46"	3" NPT	1" NPT	3" NPT	2"	1,025
TSV450-J*	450	92"	46"	3" NPT	1" NPT	3" NPT	2"	1,075
TSV505-J*	505	101"	46"	3" NPT	1" NPT	3" NPT	2"	1,170
TSV575-J*	575	113"	46"	3" NPT	1" NPT	3" NPT	2"	1,295
TSV645-J*	645	125"	46"	3" NPT	1" NPT	3" NPT	2"	1,395
TSV720-J*	720	137"	46"	3" NPT	1" NPT	3" NPT	2"	1,500
TSV775-J*	775	147"	46"	3" NPT	1" NPT	3" NPT	2"	1,590
TSV500-J*	500	81"	52"	3" NPT	1" NPT	3" NPT	2"	1,385
TSV580-J*	580	92"	52"	3" NPT	1" NPT	3" NPT	2"	1,540
TSV675-J*	675	104"	52"	3" NPT	1" NPT	3" NPT	2"	1,655
TSV765-J*	765	116"	52"	3" NPT	1" NPT	3" NPT	2"	1,805
TSV860-J*	860	128"	52"	3" NPT	1" NPT	3" NPT	2"	1,950
TSV1040-J*	1,040	149"	52"	3" NPT	1" NPT	3" NPT	2"	2,220
TSV875-J*	875	107"	58"	3" NPT	1-1/2" NPT	3" NPT	2"	2,200
TSV1000-J*	1,000	121"	58"	3" NPT	1-1/2" NPT	3" NPT	2"	2,400
TSV1110-J*	1,110	129"	58"	3" NPT	1-1/2" NPT	3" NPT	2"	2,575
TSV1001-J*	1,000	104"	64"	3" NPT	1-1/2" NPT	3" NPT	2"	2,600
TSV1245-J*	1,245	122"	64"	3" NPT	1-1/2" NPT	3" NPT	2"	3,050
TSV1430-J*	1,430	136"	64"	3" NPT	1-1/2" NPT	3" NPT	2"	3,175
TSV1530-J*	1,530	146"	64"	3" NPT	1-1/2" NPT	3" NPT	2"	3,500
Consult Factory	Larger & Custom Sizes, Stainless Steel and Tank Options Available							

Notes:

- 1) * Tank Lining: 1 = 10 Mils Glass Thickness; 2 = 20 Mils Glass Thickness; E = Epoxy; S = Stainless Steel
- 2) Tank information is subject to change without notice.

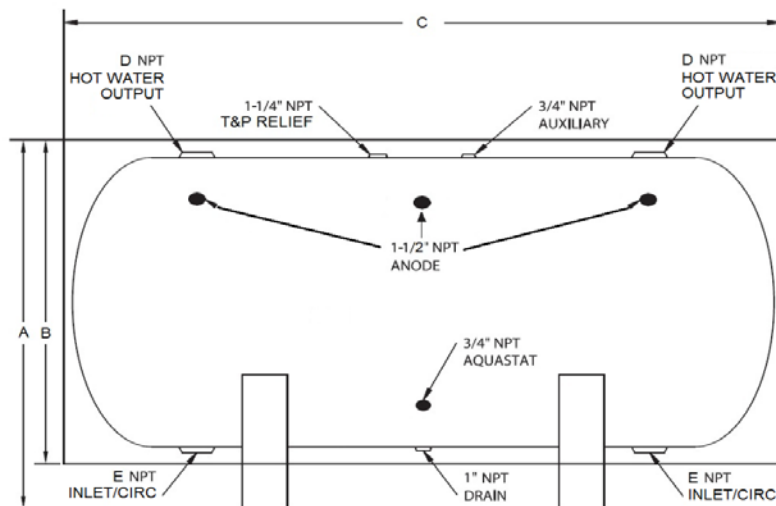


Horizontal, Jacketed and Insulated Large Volume Hot Water Storage Tanks

Model	Actual Gallons	Height (A)	Diameter (B)	Length (C)	Hot Water Outlet (D)	Drain	Inlet / Circulation (E)	Saddle Clearance	125 PSI Approx. Ship Wgt
TSH175-J*	175	41"	34"	67"	2-1/2" NPT	1" NPT	3" NPT	7"	570
TSH210-J*	210	41"	34"	79"	2-1/2" NPT	1" NPT	3" NPT	7"	640
TSH240-J*	240	41"	34"	89"	2-1/2" NPT	1" NPT	3" NPT	7"	705
TSH280-J*	280	41"	34"	103"	2-1/2" NPT	1" NPT	3" NPT	7"	730
TSH320-J*	320	41"	34"	115"	2-1/2" NPT	1" NPT	3" NPT	7"	775
TSH285-J*	285	47"	40"	76"	2-1/2" NPT	1" NPT	3" NPT	7"	780
TSH310-J*	310	47"	40"	82"	2-1/2" NPT	1" NPT	3" NPT	7"	830
TSH340-J*	340	47"	40"	89"	2-1/2" NPT	1" NPT	3" NPT	7"	880
TSH360-J*	360	47"	40"	94"	2-1/2" NPT	1" NPT	3" NPT	7"	935
TSH415-J*	415	47"	40"	106"	2-1/2" NPT	1" NPT	3" NPT	7"	1,020
TSH465-J*	465	47"	40"	118"	2-1/2" NPT	1" NPT	3" NPT	7"	1,160
TSH515-J*	515	47"	40"	130"	2-1/2" NPT	1" NPT	3" NPT	7"	1,260
TSH435-J*	435	53"	46"	85"	3" NPT	1" NPT	3" NPT	7"	1,050
TSH450-J*	450	53"	46"	88"	3" NPT	1" NPT	3" NPT	7"	1,110
TSH505-J*	505	53"	46"	97"	3" NPT	1" NPT	3" NPT	7"	1,185
TSH575-J*	575	53"	46"	109"	3" NPT	1" NPT	3" NPT	7"	1,265
TSH645-J*	645	53"	46"	121"	3" NPT	1" NPT	3" NPT	7"	1,355
TSH720-J*	720	53"	46"	133"	3" NPT	1" NPT	3" NPT	7"	1,460
TSH775-J*	775	53"	46"	143"	3" NPT	1" NPT	3" NPT	7"	1,550
TSH500-J*	500	59"	52"	77"	3" NPT	1" NPT	3" NPT	7"	1,450
TSH580-J*	580	59"	52"	88"	3" NPT	1" NPT	3" NPT	7"	1,595
TSH675-J*	675	59"	52"	100"	3" NPT	1" NPT	3" NPT	7"	1,750
TSH765-J*	765	59"	52"	112"	3" NPT	1" NPT	3" NPT	7"	1,925
TSH860-J*	860	59"	52"	124"	3" NPT	1" NPT	3" NPT	7"	2,070
TSH1040-J*	1,040	59"	52"	145"	3" NPT	1" NPT	3" NPT	7"	2,410
TSH875-J*	875	65"	58"	103"	3" NPT	1" NPT	3" NPT	7"	2,275
TSH1000-J*	1,000	65"	58"	117"	3" NPT	1" NPT	3" NPT	7"	2,475
TSH1110-J*	1,110	65"	58"	127"	3" NPT	1" NPT	3" NPT	7"	2,650
TSH1215-J*	1,215	65"	58"	138"	3" NPT	1" NPT	3" NPT	7"	2,825
TSH1001-J*	1,000	71"	64"	100"	3" NPT	1" NPT	3" NPT	7"	2,675
TSH1245-J*	1,245	71"	64"	118"	3" NPT	1" NPT	3" NPT	7"	3,125
TSH1530-J*	1,530	71"	64"	142"	3" NPT	1" NPT	3" NPT	7"	3,575
Consult Factory	Larger & Custom Sizes, Stainless Steel and Tank Options Available								

Notes:

- 1) * Tank Lining: 1 = 10 Mills Glass Thickness; 2 = 20 Mills Glass Thickness; E = Epoxy; S = Stainless Steel
- 2) Tank information is subject to change without notice.

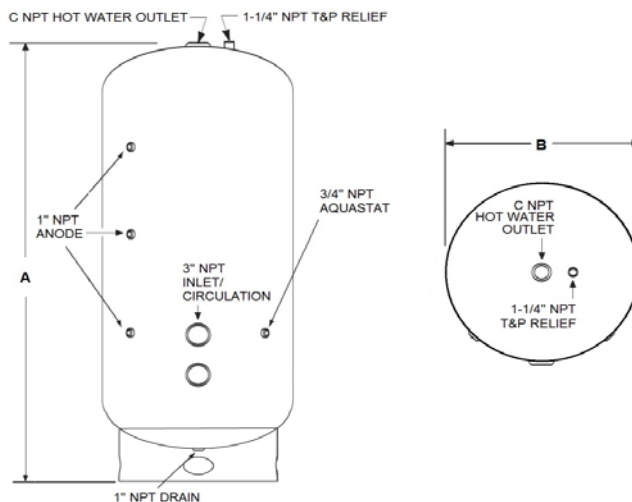


Vertical, Bare Large Volume Hot Water Storage Tanks

Model	Actual Gallons	Height (A)	Diameter (B)	Hot Water Outlet (C)	Drain	Inlet / Circulation	Base Clearance	125 PSI Approx. Ship Wgt
TSV175-B*	175	67"	30"	2-1/2" NPT	1" NPT	3" NPT	4"	340
TSV210-B*	210	79"	30"	2-1/2" NPT	1" NPT	3" NPT	4"	390
TSV240-B*	240	89"	30"	2-1/2" NPT	1" NPT	3" NPT	4"	420
TSV280-B*	280	103"	30"	2-1/2" NPT	1" NPT	3" NPT	4"	485
TSV320-B*	320	115"	30"	2-1/2" NPT	1" NPT	3" NPT	4"	530
TSV285-B*	285	76"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	550
TSV310-B*	310	82"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	590
TSV340-B*	340	89"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	635
TSV360-B*	360	94"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	665
TSV415-B*	415	106"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	745
TSV465-B*	465	118"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	820
TSV515-B*	515	130"	36"	2-1/2" NPT	1" NPT	3" NPT	4"	895
TSV435-B*	435	85"	42"	3" NPT	1" NPT	3" NPT	4"	785
TSV453-B*	450	88"	42"	3" NPT	1" NPT	3" NPT	4"	805
TSV505-B*	505	97"	42"	3" NPT	1" NPT	3" NPT	4"	875
TSV575-B*	575	109"	42"	3" NPT	1" NPT	3" NPT	4"	965
TSV645-B*	645	121"	42"	3" NPT	1" NPT	3" NPT	4"	1,055
TSV720-B*	720	133"	42"	3" NPT	1" NPT	3" NPT	4"	1,140
TSV775-B*	775	143"	42"	3" NPT	1" NPT	3" NPT	4"	1,220
TSV500-B*	500	77"	48"	3" NPT	1" NPT	3" NPT	4"	1,040
TSV580-B*	580	88"	48"	3" NPT	1" NPT	3" NPT	4"	1,165
TSV675-B*	675	100"	48"	3" NPT	1" NPT	3" NPT	4"	1,300
TSV765-B*	765	112"	48"	3" NPT	1" NPT	3" NPT	4"	1,435
TSV860-B*	860	124"	48"	3" NPT	1" NPT	3" NPT	4"	1,570
TSV1040-B*	1,040	145"	48"	3" NPT	1" NPT	3" NPT	4"	1,805
TSV875-B*	875	105"	54"	3" NPT	1-1/2" NPT	3" NPT	6"	1,600
TSV1000-B*	1,000	119"	54"	3" NPT	1-1/2" NPT	3" NPT	6"	1,830
TSV1110-B*	1,110	129"	54"	3" NPT	1-1/2" NPT	3" NPT	6"	1,890
TSV1001-B*	1,000	102"	60"	3" NPT	1-1/2" NPT	3" NPT	6"	2,010
TSV1245-B*	1,245	120"	60"	3" NPT	1-1/2" NPT	3" NPT	6"	2,380
TSV1430-B*	1,430	134"	60"	3" NPT	1-1/2" NPT	3" NPT	6"	2,475
TSV1530-B*	1,530	144"	60"	3" NPT	1-1/2" NPT	3" NPT	6"	2,800
Consult Factory	Larger & Custom Sizes, Stainless Steel and Tank Options Available							

Notes:

- 1) * Tank Lining: 1 = 10 Mils Glass Thickness; 2 = 20 Mils Glass Thickness; E = Epoxy; S = Stainless Steel
- 2) Tank information is subject to change without notice.



Horizontal, Bare Large Volume Hot Water Storage Tanks

Model	Actual Gallons	Height (A)	Diameter (B)	Length (C)	Hot Water Outlet (D)	Drain	Inlet / Circulation (E)	Saddle Clearance	125 PSI Approx. Ship Wgt
TSH175-B*	175	39"	30"	63"	2-1/2" NPT	1" NPT	3" NPT	9"	365
TSH210-B*	210	39"	30"	75"	2-1/2" NPT	1" NPT	3" NPT	9"	415
TSH240-B*	240	39"	30"	85"	2-1/2" NPT	1" NPT	3" NPT	9"	445
TSH280-B*	280	39"	30"	99"	2-1/2" NPT	1" NPT	3" NPT	9"	510
TSH320-B*	320	39"	30"	111"	2-1/2" NPT	1" NPT	3" NPT	9"	555
TSH285-B*	285	45"	36"	72"	2-1/2" NPT	1" NPT	3" NPT	9"	580
TSH310-B*	310	45"	36"	78"	2-1/2" NPT	1" NPT	3" NPT	9"	615
TSH340-B*	340	45"	36"	85"	2-1/2" NPT	1" NPT	3" NPT	9"	660
TSH360-B*	360	45"	36"	90"	2-1/2" NPT	1" NPT	3" NPT	9"	690
TSH415-B*	415	45"	36"	102"	2-1/2" NPT	1" NPT	3" NPT	9"	770
TSH465-B*	465	45"	36"	114"	2-1/2" NPT	1" NPT	3" NPT	9"	845
TSH515-B*	515	45"	36"	126"	2-1/2" NPT	1" NPT	3" NPT	9"	920
TSH435-B*	435	51"	42"	81"	3" NPT	1" NPT	3" NPT	9"	810
TSH450-B*	450	51"	42"	84"	3" NPT	1" NPT	3" NPT	9"	835
TSH505-B*	505	51"	42"	93"	3" NPT	1" NPT	3" NPT	9"	900
TSH575-B*	575	51"	42"	105"	3" NPT	1" NPT	3" NPT	9"	975
TSH645-B*	645	51"	42"	117"	3" NPT	1" NPT	3" NPT	9"	1,080
TSH720-B*	720	51"	42"	129"	3" NPT	1" NPT	3" NPT	9"	1,170
TSH775-B*	775	51"	42"	139"	3" NPT	1" NPT	3" NPT	9"	1,245
TSH500-B*	500	57"	48"	73"	3" NPT	1" NPT	3" NPT	9"	1,090
TSH580-B*	580	57"	48"	84"	3" NPT	1" NPT	3" NPT	9"	1,215
TSH675-B*	675	57"	48"	96"	3" NPT	1" NPT	3" NPT	9"	1,350
TSH765-B*	765	57"	48"	108"	3" NPT	1" NPT	3" NPT	9"	1,485
TSH860-B*	860	57"	48"	120"	3" NPT	1" NPT	3" NPT	9"	1,620
TSH1040-B*	1,040	57"	48"	141"	3" NPT	1" NPT	3" NPT	9"	1,860
TSH875-B*	875	63"	54"	99"	3" NPT	1" NPT	3" NPT	9"	1,700
TSH1001-B*	1,000	63"	54"	113"	3" NPT	1" NPT	3" NPT	9"	1,950
TSH1110-B*	1,110	63"	54"	123"	3" NPT	1" NPT	3" NPT	9"	2,125
TSH1215-B*	1,215	63"	54"	134"	3" NPT	1" NPT	3" NPT	9"	2,299
TSH1000-B*	1,000	69"	60"	96"	3" NPT	1" NPT	3" NPT	9"	2,040
TSH1245-B*	1,245	69"	60"	114"	3" NPT	1" NPT	3" NPT	9"	2,650
TSH1530-B*	1,530	69"	60"	138"	3" NPT	1" NPT	3" NPT	9"	2,830
Consult Factory	Larger & Custom Sizes, Stainless Steel and Tank Options Available								

Notes:

- 1) * Tank Lining: 1 = 10 Mills Glass Thickness; 2 = 20 Mills Glass Thickness; E = Epoxy; S = Stainless Steel
- 2) Tank information is subject to change without notice.

