ThermoCon™ buffer storage tanks

NAS200 series

ISO 9001 FM 21654

ISO 9001 No. 00

01179/14 NA



Function

ThermoCon™ buffer storage tanks are multi-use tanks designed to be used for wood fired boilers, solar and geothermal storage, plus in heating systems with low-mass boilers, chilled water systems and low-mass radiation. These fully-insulated, porcelain-coated steel tanks are ideal for chilled, hot water, or potable water applications. Short-cycling in boilers and chillers is a common problem that reduces the efficiency of hydronic equipment and shortens its lifespan. In addition, solar thermal and geothermal systems often need more thermal storage in order to keep up with the peak thermal demands of a building. ThermoCon™ tanks maximize the efficiency of any hydronic system by providing thermal storage and can also serve as a hydraulic separator to prevent pump conflict. In plumbing applications, it is a hot water storage tank for water that is heated from another source including a traditional boiler, wood fired boiler, heat pump or solar.

Meets and exceeds CSA C309 requirements.

Product range

NAS20025	Storage tank	25 gallon
NAS20050	Storage tank	50 gallon
NAS20080	Storage tank	80 gallon
NAS20120	Storage tank	119 gallon

Technical specifications

Tank materials:	porcelain glass coated steel
Tank insulation:	2" non-CFC foam
Tank external cover:	powder-coated steel (20-24 ga.)
Insulation thermal conductivity:	R16
Connections:	
25 gal.	top (2) 1½" & (1) ¾" NPT
25 gal.	side (4) 1½" & (1) ¾" NPT female
50, 80, 119 gal.	top (3) ¾" NPT female
50, 80, 119 gal.	side (7) 2" NPT female
Max. working pressure:	150 psi (10 bar)
Working temperature:	-40 to 190°F (-40 to 90°C)
Testing pressure:	300 psi (20 bar)
Max. tank temperature:	180°F (80°C)
Recommended max. delivery hot water temperature:	120°F (50°C)

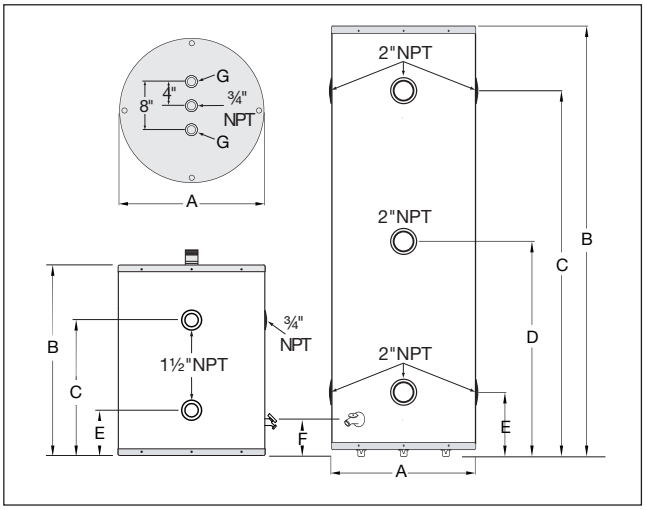
Reduction of Lead in Drinking Water Act Compliant: 0.25% Max. weighted average lead content. Reduction of Lead in Drinking Water Act Certified through Underwriters Laboratory (UL) in accordance with NSF/ANSI 372.

Construction details

The ThermoCon™ 25 gallon tank is engineered with six (6) 1½" NPT connections. Two top connections can be piped right below a wall hung modulating / condensing boiler. One of the top connections has a 1½" NPT male thread with a dip tube to draw cooler water from the bottom of the tank. The other top 1½" NPT connection is female. The four side 1½" NPT female connections can be piped to the load.

The ThermoCon™ 50, 80 & 119 gallon tanks are engineered with seven (7) 2" NPT connections. Two connections can be piped to the solar, boiler or chiller side and two connections can be piped to the distribution system. Two additional connections are 90 degrees from another which allows for positioning the tank into a corner with the piping at a right angle. The tank has one 2" NPT connection for connecting an external heat exchanger in the middle of the tank.

Dimensions



Code	Gal.	A	B	C	D	E	F	G	Wt. lbs
NAS20025	25	22"	28½"	20½"	–	6¾"	4"	1½"	100
NAS20050	50	22"	48¼"	39½"	23½"	7¾"	4½"	¾"	200
NAS20080	80	24"	64"	53"	32"	11"	5"	¾"	250
NAS20120	119	28"	65"	53"	32"	11"	7"	¾"	350

Accessories



551

DISCALAIR®

High discharge automatic air vent.

Brass body.

Stainless steel float guide pin and linkage.

Max. working pressure: 150 psi (10 bar)

Working temperature range:
32 - 250°F (0 - 120°C)

Code	Description
551004A	1/2" NPT female



Pipe nipple for attaching air vent to top of storage tank with reducing bushing.

Code	Description
NA10160	½" NPT male x ½" male NPT x 3"



Reducer busing for inserting into top of storage tank to attach pipe nipple to air vent.

Code	Description
NA10082	¾" M NPT x ½" FNPT, brass



Magnesium anode rod.

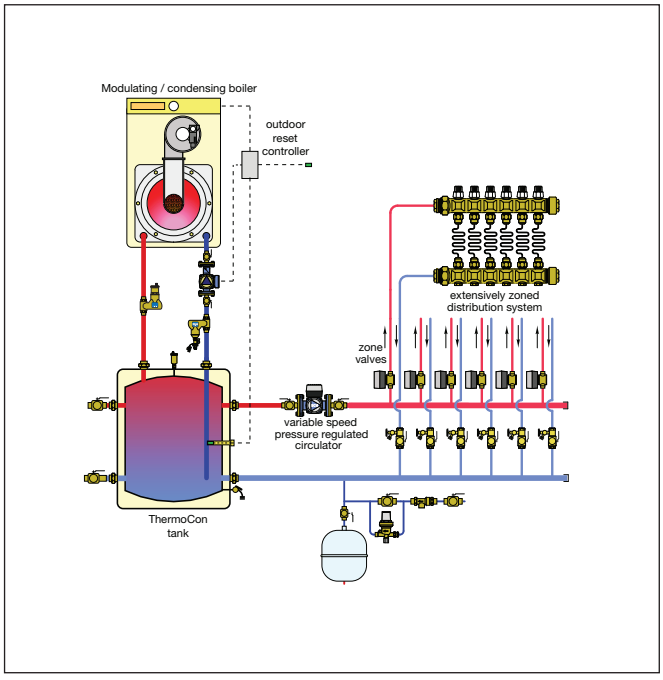
Code	Description
NA10229	¾" NPT x 36" anode rod fits 50 gallon tank
NA10230	¾" NPT x 40" anode rod fits 80 & 119 gallon tank

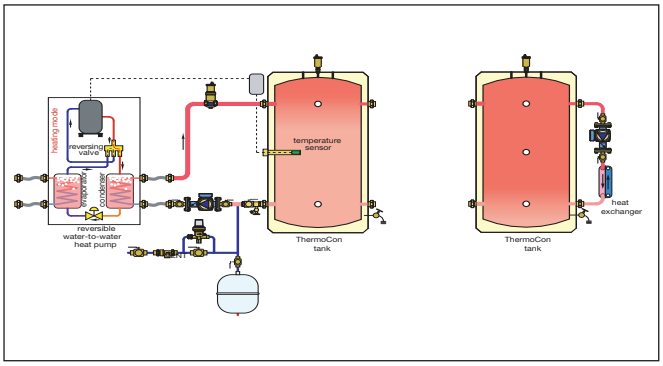


Reducer bushing for installling into 2" NPT female connection in storage tank providing a ¾: NPT female thread.

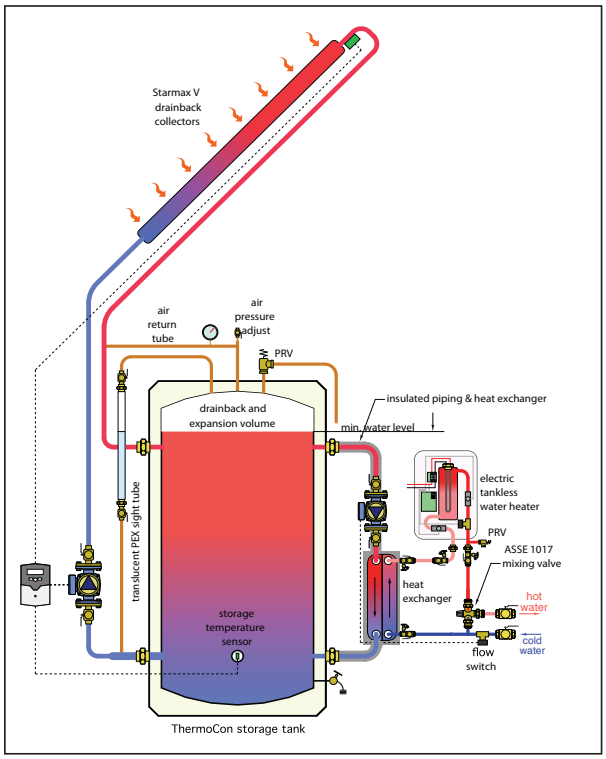
Code	Description
NA10234LF	2" M NPT x ¾" F NPT, brass

Application diagrams





Application diagram



SPECIFICATION SUMMARIES

ThermoCon™ NAS20025

25 gallon buffer vertical insulated storage tank, porcelain glass coated steel internal walls, powder-coated steel, 20-24 gauge external cover and 2 inch thick non-CFC foam insulation (minimum R16) on sides, top and bottom. Maximum working pressure: 150 psi (10 bar). Testing pressure: 300 psi (20 bar). Maximum tank temperature: 180˚F (80˚C). Working temperature: -40 to 190˚F (-40 to 90˚C). Recommended maximum delivery hot water temperature: 120˚F (50˚C). Meets and exceeds CSA C309. 3 top connections (2- 1½" NPT, 1- ¾" NPT). 5 side connections (4- 1½" NPT, 1- ¾" NPT).

ThermoCon™ NAS20050

50 gallon buffer vertical insulated storage tank, porcelain glass coated steel internal walls, powder-coated steel, 20-24 gauge external cover and 2 inch thick non-CFC foam insulation (minimum R16) on sides, top and bottom. Maximum working pressure: 150 psi (10 bar). Testing pressure: 300 psi (20 bar). Maximum tank temperature: 180˚F (80˚C). Working temperature: -40 to 190˚F (-40 to 90˚C). Recommended maximum delivery hot water temperature: 120˚F (50˚C). Meets and exceeds CSA C309. 3 top connections

ThermoCon™ NAS20080

80 gallon buffer vertical insulated storage tank, porcelain glass coated steel internal walls, powder-coated steel, 20-24 gauge external cover and 2 inch thick non-CFC foam insulation (minimum R16) on sides, top and bottom. Maximum working pressure: 150 psi (10 bar). Testing pressure: 300 psi (20 bar). Maximum tank temperature: 180˚F (80˚C). Working temperature: -40 to 190˚F (-40 to 90˚C). Recommended maximum delivery hot water temperature: 120˚F (50˚C). Meets and exceeds CSA C309. 3 top connections (¾" NPT). 7 side connections (2" NPT).

ThermoCon™ NAS20120

119 gallon buffer vertical insulated storage tank, porcelain glass coated steel internal walls, powder-coated steel, 20-24 gauge external cover and 2 inch thick non-CFC foam insulation (minimum R16) on sides, top and bottom. Maximum working pressure: 150 psi (10 bar). Testing pressure: 300 psi (20 bar). Maximum tank temperature: 180˚F (80˚C). Working temperature: -40 to 190˚F (-40 to 90˚C). Recommended maximum delivery hot water temperature: 120˚F (50˚C). Meets and exceeds CSA C309. 3 top connections (¾" NPT). 7 side connections (2" NPT).

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.

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