

BUFFMAX Specifications

BUFFMAX is a buffer tank, storage tank and a hydraulic separator used to optimize the performance of many kinds of heating or water-cooling systems, (see the CW option).

IDENTIFICATION

As manufactured by THERMO 2000 Inc., the water tank required for a closed-circuit system must be a:

BUFFMAX 20	☐	BUFFMAX 120	☐
BUFFMAX 30	☐	BUFFMAX 120A	☐
BUFFMAX 50	☐	BUFFMAX 175A	☐
BUFFMAX 80	☐	BUFFMAX 200A	☐

TANK DESCRIPTION

BUFFMAX 20, 30, 50, 80 and 120 models

The tank is made of high-density carbon steel. All joints are arc-welded using the MIG/Argon method. The tank is designed for a maximum allowable working pressure of 150 psi and undergoes a hydrostatic test of 195 psi. The tank's outer steel surface is coated with baked powder-based paint.

BUFFMAX 120A, 175A and 200A models

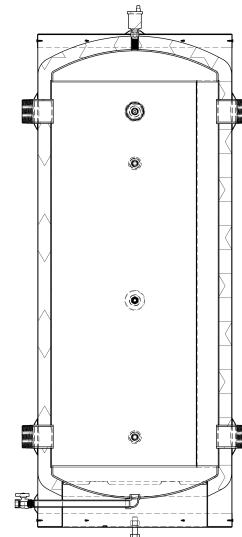
The tank **complies with the requirements of the ASME standard** "Boiler and Pressure Vessel Code, Section VIII, div.1". The tank is made of high-density carbon steel. All joints are arc-welded using the GMAW method. The tank is designed for a maximum allowable working pressure of 125 psi @ 350°F and undergoes a hydrostatic test of 163 psi. The tank's outer steel surface is coated with baked epoxy-based paint.

STANDARD FEATURES

- The tank has a total of 4 openings, 2 on each side. The tanks use NPTM connectors with the following standard sizes:

BUFFMAX 20 : 1 ¼"	BUFFMAX 50 : 2"	BUFFMAX 120: 3"	BUFFMAX 175A: 3"
BUFFMAX 30 : 1 ½"	BUFFMAX 80: 2 1/2"	BUFFMAX 120A: 3"	BUFFMAX 200A: 3"

- ½" automatic air vent with a shut-off valve for easy replacement.
- 2 ½" diameter temperature and pressure indicator on the front
- Immersion well included
- Three ½" connections for the location of the well or to enable wells to be added
- 2" HFC-free polyurethane insulation limiting heat loss to 1/2°F per hour
- ¾" drain valve located at the lowest point of the tank
- The tank has adjustable legs
- ASME models (BUFFMAX 120A, 175A and 200A) have lifting lugs



THERMO 2000 INC.

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TEL.: 819 826-5613 FAX: 819 826-6370



Peak-performance
heating systems

Revision 4 – October 2025

AVAILABLE OPTIONS

2 additional standard connections added

☐ BUFFMAX-BXT (Available for BUFFMAX 20, 30, 50, 80 and 120 models only)

Change the diameter of the standard connections

XX	1 ¼" NPT	1 ½" NPT	2" NPT	2 ½" NPT	3" NPT
BUFFMAX 20 - XXNPT	STD	☐	☐	☐	☐
BUFFMAX 30 - XXNPT	☐	STD	☐	☐	☐
BUFFMAX 50 - XXNPT	☐	☐	STD	☐	☐
BUFFMAX 80 - XXNPT	☐	☐	☐	STD	☐
BUFFMAX 120 - XXNPT	☐	☐	☐	☐	STD
BUFFMAX 120A - XXNPT	ND	ND	☐	☐	STD
BUFFMAX 175A - XXNPT	ND	ND	☐	☐	STD
BUFFMAX 200A - XXNPT	ND	ND	☐	☐	STD

Substitute standard connections for Class 150 flanges

YY	1 ¼" FLG	1 ½" FLG	2" FLG	2 ½" FLG	3" FLG	4" FLG
BUFFMAX 20 - YYFLG	☐	☐	☐	☐	☐	☐
BUFFMAX 30 - YYFLG	☐	☐	☐	☐	☐	☐
BUFFMAX 50 - YYFLG	☐	☐	☐	☐	☐	☐
BUFFMAX 80 - YYFLG	☐	☐	☐	☐	☐	☐
BUFFMAX 120 - YYFLG	☐	☐	☐	☐	☐	☐
BUFFMAX 120A - YYFLG	ND	ND	☐	☐	☐	☐
BUFFMAX 175A - YYFLG	ND	ND	☐	☐	☐	☐
BUFFMAX 200A - YYFLG	ND	ND	☐	☐	☐	☐

Add elastomeric insulation for water-cooling applications to prevent condensation on the tank's outer surface.

☐ BUFFMAX-CW

Change the direction of the connections (VRT)

XX	1 ¼" NPT	1 ½" NPT	2" NPT
BUFFMAX 20 - XXNPT - VRT	STD	ND	ND
BUFFMAX 30 - XXNPT - VRT	STD	ND	ND
BUFFMAX 50 - XXNPT - VRT	STD	ND	ND
BUFFMAX 80 - XXNPT - VRT	ND	STD	☐
BUFFMAX 120 - XXNPT - VRT	ND	☐	STD

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WARRANTIES

Heating Application

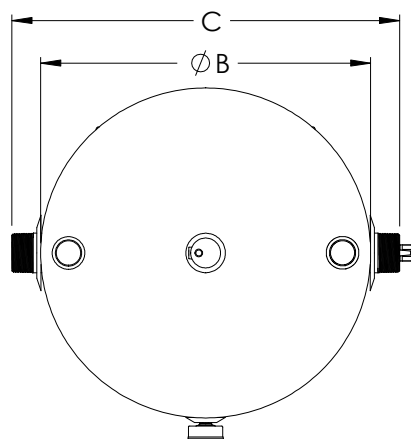
The tank is covered by a 10-year warranty for closed-circuit residential and commercial heating applications. Parts and accessories are guaranteed for 2 years.

Water-Cooling Application

The tank is covered by a 5-year warranty for closed-circuit residential and commercial water-cooling applications with the **CW option**. Parts and accessories are guaranteed for 2 years.

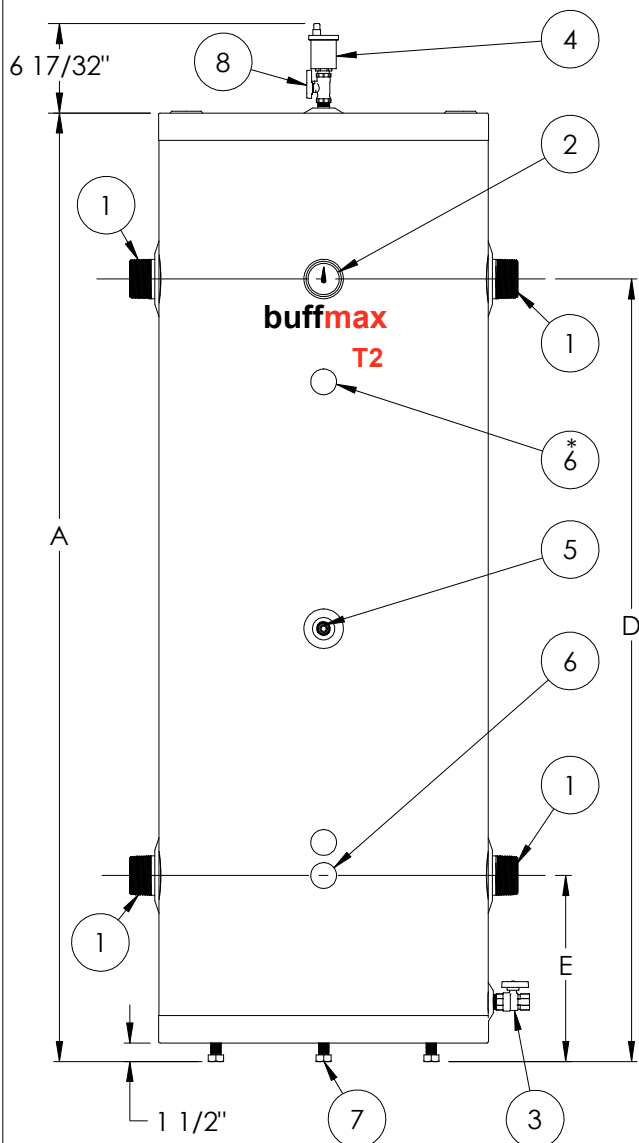
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TECHNICAL DATA

Model	Volume (Us Gal)	Standard connection MNPT	Optional connection MNPT	Optional Flange connection Class 150	Weight equipment	Shipping weight
BUFFMAX 120	119	3"	1 1/2"; 2"; 2 1/2"	1 1/2"; 2"; 2 1/2"; 3"; 4"	330 lbs	380 lbs
BUFFMAX 80	80	2 1/2"	1 1/2"; 2"; 3"	1 1/2"; 2"; 2 1/2"; 3"; 4"	245 lbs	325 lbs
BUFFMAX 50	50	2"	1 1/2"; 2 1/2"; 3"	1 1/2"; 2"; 2 1/2"; 3"; 4"	160 lbs	230 lbs
BUFFMAX 30	30	1 1/2"	1 1/2"; 2"; 2 1/2"; 3"	1 1/2"; 2"; 2 1/2"; 3"; 4"	125 lbs	185 lbs
BUFFMAX 20	20	1 1/4"	1 1/2"; 2"; 2 1/2"; 3"	1 1/2"; 2"; 2 1/2"; 3"; 4"	100 lbs	160 lbs



COMPONENT IDENTIFICATION

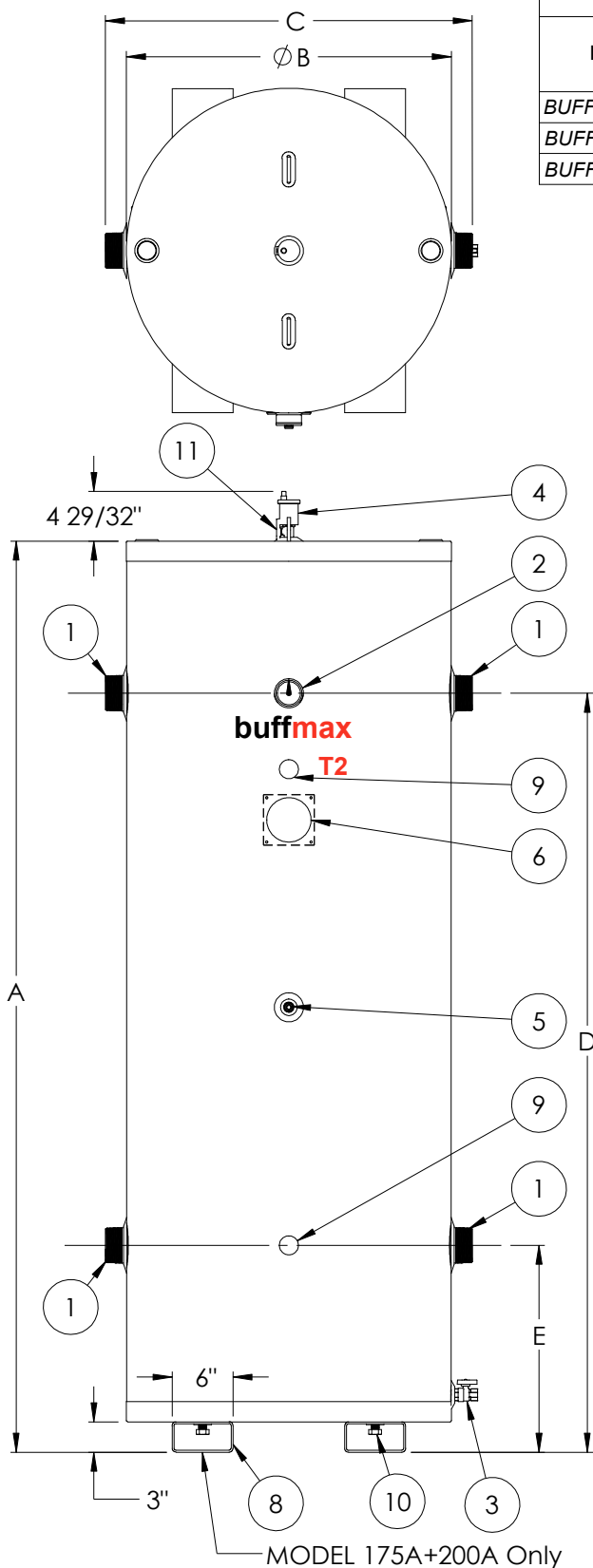
- 1 Boiler water connection
- 2 Temp. & Press. indicator 1/2NPT
- 3 Tank drain valve 3/4NPT
- 4 Automatic air vent 1/2NPT
- 5 Immersion well 1/2NPT
- 6 Removable Caps to add immersion well
- 7 Adjustable legs
- 8 Ball valve 1/2NPT

*: Additional well location only available on BUFFMAX 80 and 120 models.

The dimensions provided are for reference only. Please contact Thermo2000 for certified dimensions.

DIMENSIONS

MODEL	A	B	C	D	E
	in.	in.	in.	in.	in.
BUFFMAX 20	49 1/2	16	19 5/16	39 11/16	11 3/16
BUFFMAX 30	56	18	21 1/2	46 1/4	13 1/4
BUFFMAX 50	57	22	25 1/2	46 3/4	13 3/4
BUFFMAX 80*	71	24	28 1/2	61	14
BUFFMAX 120*	72 1/2	28	33 1/2	62	15



TECHNICAL DATA

Model	Volume (Us Gal)	Standard connection MNPT	Optional connection MNPT	Optional Flange connection Class 150	Weight equipment	Shipping weight
BUFFMAX 200A	200	3"	2"; 2 1/2"	2"; 2 1/2"; 3"; 4"	650 lbs	760 lbs
BUFFMAX 175A	175	3"	2"; 2 1/2"	2"; 2 1/2"; 3"; 4"	595 lbs	700 lbs
BUFFMAX 120A	120	3"	2"; 2 1/2"	2"; 2 1/2"; 3"; 4"	355 lbs	435 lbs

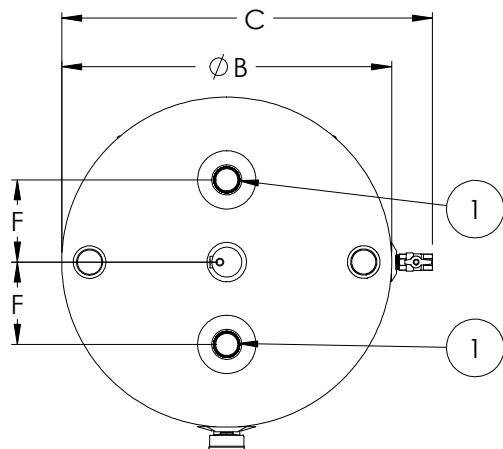
COMPONENT IDENTIFICATION

- 1 Boiler water connection
- 2 Temp. & Press. indicator 1/2NPT
- 3 Tank drain valve 3/4NPT
- 4 Automatic air vent 1/2NPT
- 5 Immersion well 1/2NPT
- 6 Asme Code Nameplate Access
- 7 Lifting lugs
- 8 Removable Tube for ForkLift
- 9 Removable Caps to add immersion well
- 10 Adjustable legs
- 11 Ball valve 1/2NPT

The dimensions provided are for indicative purposes only. Please contact Thermo2000 for certified dimensions.

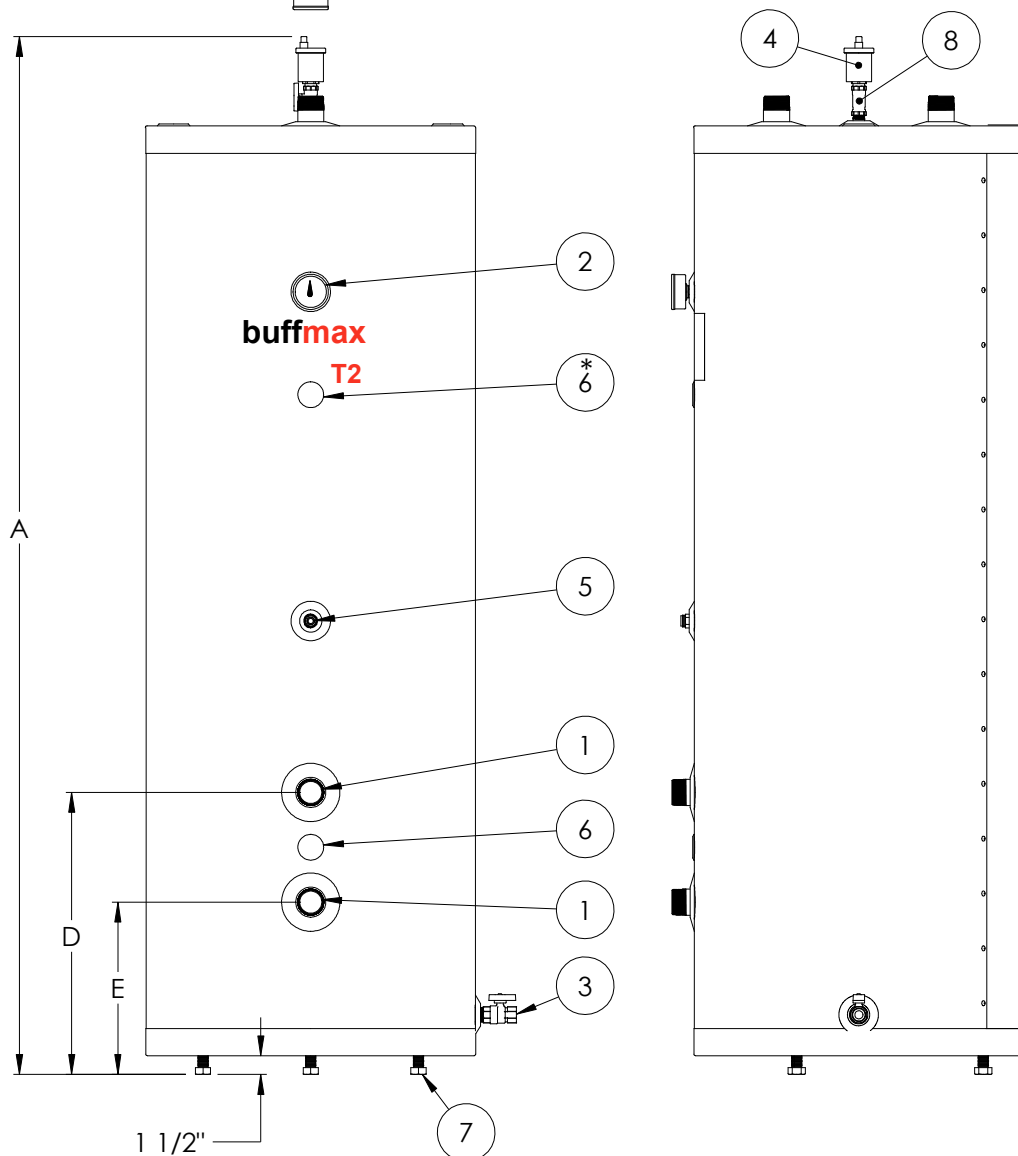
DIMENSIONS

MODEL	A	B	C	D	E
	in.	in.	in.	in.	in.
BUFFMAX 120A	73 1/4	28	33 1/4	60 3/8	17 3/8
BUFFMAX 175A	82 1/8	32	37 1/4	67 3/16	20 1/2
BUFFMAX 200A	90	32	37 1/4	75	20 1/2



DONNÉES TECHNIQUES

Modèle	Volume (gal Us)	Raccords Standards MNPT	Raccords optionnels MNPT	Poids Équipements	Poids à l'expédition
BUFFMAX VRT 120	119	2"	1 1/2"	330 lbs	380 lbs
BUFFMAX VRT 80	80	1 1/2"	2"	245 lbs	325 lbs
BUFFMAX VRT 50	50	1 1/4"	-	160 lbs	230 lbs
BUFFMAX VRT 30	30	1 1/4"	-	125 lbs	185 lbs
BUFFMAX VRT 20	20	1 1/4"	-	100 lbs	160 lbs



IDENTIFICATION DES COMPOSANTES

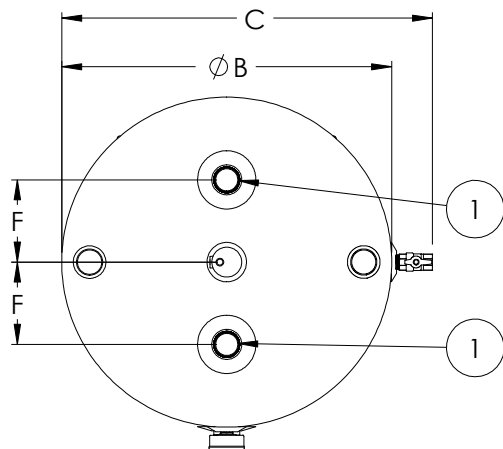
- 1 Connexions eau
- 2 Indicateur temp. & press. 1/2NPT
- 3 Robinet vidange réservoir 3/4NPT
- 4 Éliminateur d'air automa. 1/2NPT
- 5 Puit d'immersion 1/2NPT
- 6 Capuchon amovible pour rajouter des puits d'immersion
- 7 Pattes ajustables
- 8 Valve à bille 1/2NPT

* : Emplacement pour puits seulement disponible sur les modèles **BUFFMAX 80 et 120**.

Les dimensions indiquées sont à titre indicatif seulement. Veuillez contacter Thermo2000 pour obtenir les dimensions certifiées.

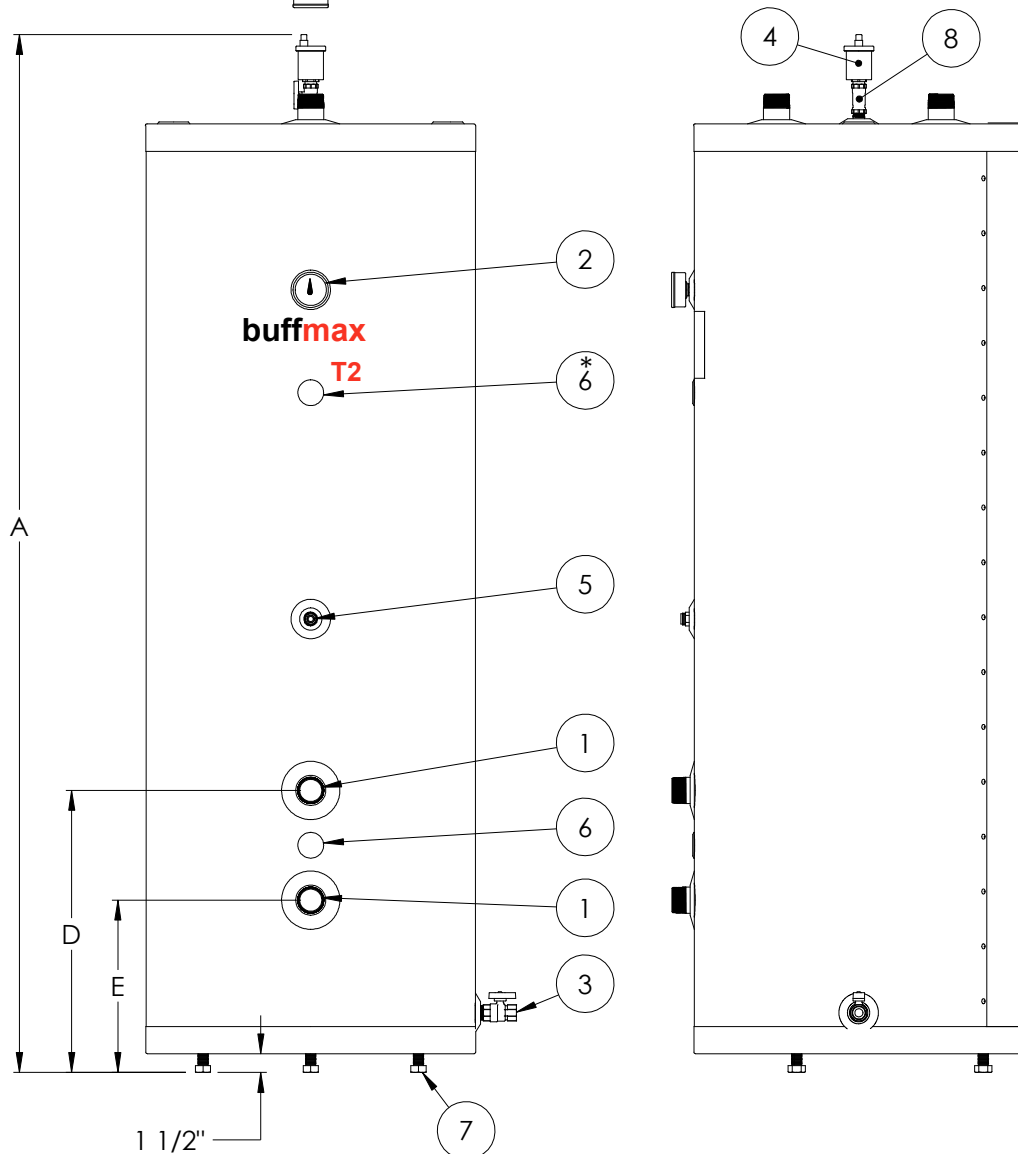
DIMENSIONS

MODÈLE	A	B	C	D	E	F
	po.	po.	po.	po.	po.	po.
BUFFMAX VRT 20	55 7/8	16	20	16 5/8	9 5/8	4
BUFFMAX VRT 30	61	18	21	17 1/4	10 1/4	4
BUFFMAX VRT 50	62 3/16	22	25	18 9/16	11 9/16	4
BUFFMAX VRT 80*	75 11/16	24	27	20 9/16	12 9/16	6
BUFFMAX VRT 120*	77 5/8	28	31 5/16	21 5/8	13 5/8	6



TECHNICAL DATA

Model	Volume (Us Gal)	Standard connection MNPT	Optional connection MNPT	Weight equipment	Shipping weight
BUFFMAX VRT 120	119	2"	1 1/2"	330 lbs	380 lbs
BUFFMAX VRT 80	80	1 1/2"	2"	245 lbs	325 lbs
BUFFMAX VRT 50	50	1 1/4"	-	160 lbs	230 lbs
BUFFMAX VRT 30	30	1 1/4"	-	125 lbs	185 lbs
BUFFMAX VRT 20	20	1 1/4"	-	100 lbs	160 lbs



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- 4 Automatic air vent 1/2NPT
- 5 Immersion well 1/2NPT
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- 7 Adjustable legs
- 8 Ball valve 1/2NPT

* : Additional well location only available on **BUFFMAX 80 and 120** models.

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DIMENSIONS

MODEL	A	B	C	D	E	F
	in.	in.	in.	in.	in.	in.
BUFFMAX VRT 20	55 7/8	16	20	16 5/8	9 5/8	4
BUFFMAX VRT 30	61	18	21	17 1/4	10 1/4	4
BUFFMAX VRT 50	62 3/16	22	25	18 9/16	11 9/16	4
BUFFMAX VRT 80*	75 11/16	24	27	20 9/16	12 9/16	6
BUFFMAX VRT 120*	77 5/8	28	31 5/16	21 5/8	13 5/8	6