

IBC[®]

Installation & Operating Manual



BUFFER TANK

IBT 25
IBT 52

IBT Buffer tanks

Safety Information



Danger

Points out an immediate hazardous situation that must be avoided to prevent serious injury or death.



Warning

Points out a potential hazardous situation that must be avoided to prevent serious injury or death.



Caution

Points out a potential hazardous situation that must be avoided to prevent possible moderate injury and/or property damage.



Note

Points out installation, maintenance and operational notes to enhance efficiency, longevity and proper operation of the boiler.

Important information



Danger

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

If you smell gas vapors, do not try to operate any appliance. Do not touch any electrical switch or use any phone in the building. Immediately, call the gas supplier from a remotely located phone. Follow the gas supplier's instructions or if the supplier is unavailable, contact the fire department. Do not operate any appliance until the leakage is corrected.



Warning

Improper installation, adjustment, alteration, service or maintenance, and failure to follow all instructions in the proper order can cause property damage, personal injury, or loss of life. Read and understand the entire manual before attempting installation, start-up, operation, or service. Installation and service must be performed only by an experienced, skilled installer or service agency.

This tank contains very hot water under high pressure. Do not unscrew any pipe fittings or attempt to disconnect any components of this tank without confirming that the water is cool and has no pressure. Always wear protective clothing and equipment when installing, starting up or servicing this tank to prevent scalding injuries. Do not rely on the pressure and temperature gauges to determine the temperature and pressure of the tank. This tank contains components that become very hot when the boiler is operating. Do not touch any components unless they are cool.

**Caution**

To reduce the risk of excessive pressures and temperatures, install pressure protective equipment as required by local codes, but no less than a relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22-latest edition.

This valve must be marked with a maximum set pressure below the marked working pressure of the hydronic system. Install the valve and position it, or provide tubing, so that any discharge from the valve will exit within 6 inches above, or at any distance below, the structural floor, away from any live electrical components. The discharge opening must not be blocked or reduced in size.

Note

This appliance must be installed in accordance with installation regulations required in the area where the installation is to be made. These regulations must be carefully followed in all cases. Authorities having jurisdiction shall be consulted before the installations are made. All wiring must adhere to the National Electrical Code (latest edition) and/or local regulations.

Important safety instructions**Warning**

When using electrical appliances, safety precautions should be taken to reduce the risks of fire, electric shock, and injury. These precautions include the following:

- » This tank must be grounded if an electrical control is used.
- » Install or locate this buffer tank only in accordance with the provided installation instructions.
- » Use this tank only for its intended use as described in this manual.
- » As with any appliance, close supervision is necessary when used by children.
- » This tank should be installed and serviced only by qualified personnel.

Dimensions and Capacity

Buffer Tank Capacities				
Model	Storage Volume	Piping Connections	Drain size	Max. Tank Working Pressure
IBT 25	23.2 USG / 88 L	1 ½" NPT	¾" NPT	150 psi
IBT 52	52.6 USG / 199 L	1 ½" NPT	¾" NPT	150 psi

Table 1 Buffer tank capacities

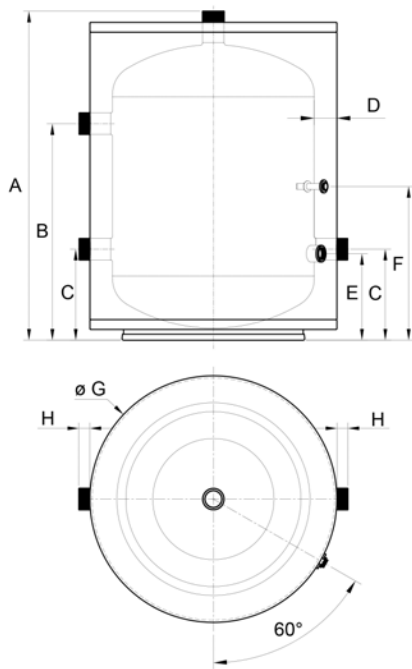


Figure 1 IBT 25 Dimensions

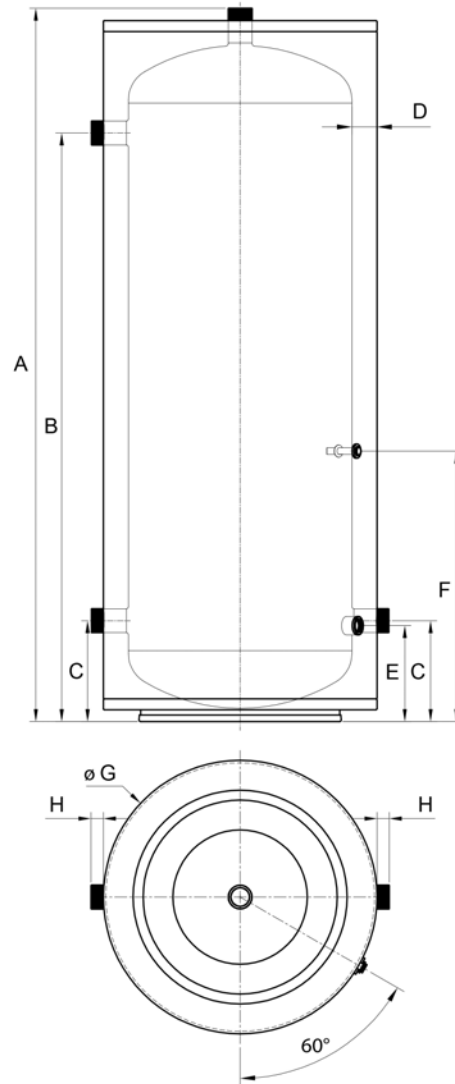


Figure 2 IBT 52 Dimensions

Dimensions (cm / ")								
Model	A Height	B	C	D	E	F	G Diameter	H
IBT 25	74 / 29.1	48.3 / 19	20.3 / 8	5 / 2	19.3 / 7.6	34.3 / 13.5	55 / 21.7	2.5 / 1
IBT 52	144 / 56.7	118.3 / 46.6	20.3 / 8	5 / 2	19.3 / 7.6	54.3 / 21.4	55 / 21.7	2.5 / 1

Table 2 Buffer tank dimensions

**Warning**

Use this vessel only in hydronic systems. The installer must comply with all plumbing codes. Do not operate above the temperature or pressure specified on the rating plate. Failure to comply may result in personal injury, property damage, or death.

**Warning**

Do not use in potable water systems.

This buffer tank is designed for use with geothermal heat pumps/ chillers/ low mass boilers to reduce short cycling. They are used primarily in systems operating below the design load condition, or in systems having several low BTU cooling or heating loads calling at different times. This can cause the appliances to short cycle, resulting in reduced operating efficiency and shorter equipment life.

This tank is built with four connections: two connections for piping to the heating or cooling source (on the left side), and two connections for piping to the distribution system (on top and on the right side). The tank can serve as both a thermal buffer and a hydraulic separator to hydraulically decouple the heating or cooling source from the distribution system.

The buffer tank is constructed with 444 stainless steel, 316 stainless steel connection fittings, 2" thick foam insulation and a powder coated galvanized steel jacket. A 3/8" ID thermal well is located mid-tank. Thermistors can be inserted 3" into the well. Alternatively, Honeywell L4006A Controls can also be used.

Piping connections to both the heating or cooling source and the distribution system are 1 1/2" NPT. The drain is 3/4" NPT.

The tank's top fitting should be piped to the distribution supply line and the air purger and vent, so that the tank will be self venting, and no additional air vent is needed. Pipe the buffer tank so that the heating or cooling source is hydraulically decoupled from the distribution system.

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Information in this document is subject to change without notice. IBC assumes no responsibility for changes made to the manual due to clerical errors, to regulation changes, or to product development.

March, 2021 | 120-369E (R2)

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