

Expansion Tank

The Flamco Nex Series ASME expansion tanks offer a removable bladder and are pre-charged. The NEXTank is designed to absorb expansion volumes and control the pressure in heating and cooling systems. The system fluid is contained in a full acceptance heavy duty butyl bladder that helps to prevent corrosion as well as waterlogging issues.

General

- Maximum working temperature: 240°F
- Maximum working pressure: 125 PSI
- Suitable for Water/Glycol mixes up to 50%
- Pre-Charge Pressure: 40 PSI (To be verified during installation procedure)

Materials

- Shell: Carbon Steel
- Heads: Carbon Steel
- Interior: Heavy Duty Butyl Bladder

Safety

- The NexTank is delivered pre-charged and damage to the structure of the tank can cause serious injury to nearby personnel.
- Prevent overpressure in the installation; install a relief valve to protect system components
 - a. Set the overpressure in the installation to a value equal to or lower than the maximum working pressure shown on the tank label
- The plug on larger NexTanks (264 - 3963 gallons) must not be removed (label D) as removal may cause the internal bladder to burst. Plug D should only be removed as necessary and only after the pressure inside the tank has been released to zero gauge pressure.

Handling and Storage

All tanks should be moved using the lift lugs welded to the unit (if equipped). Lifting the tank by clipping an eye hook into the lift lugs is the safest and most effective way to move the unit. Note that not all lift lugs are placed at the center of gravity, the unit may shift once lifted off the ground. Ensure that the weight of the unit does not exceed the rating of the rigging equipment.

Outdoor Storage:

- Cover all units with a tarp to protect from the elements.
- Do not store in potential flood plain.
- Cover all openings on the units to prevent foreign matter from entering the unit.
- Place in a safe location, away from heavy traffic.
- Bladder tanks are under pressure during shipment. Damaging these tanks could be extremely dangerous.

Indoor Storage:

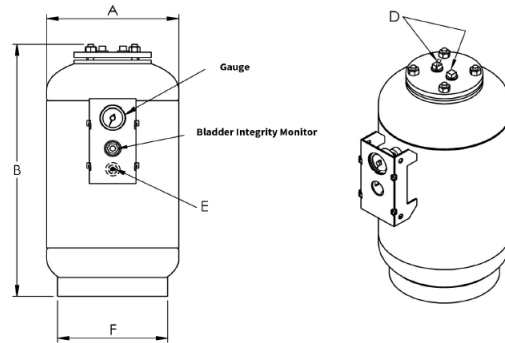
- Cover all openings on the units to prevent foreign matter from entering the unit.
- Unit should be stored in a dry environment, away from any potential sources of moisture.
- Place in a safe location, away from heavy traffic.
- Bladder tanks are under pressure during shipment. Damaging these tanks could be extremely dangerous.



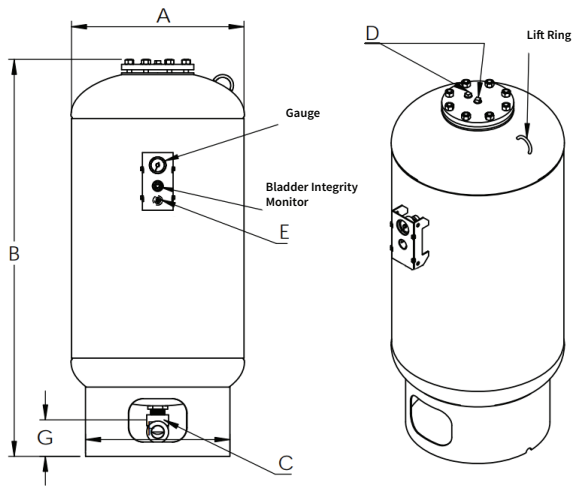
Drawings Dimensions



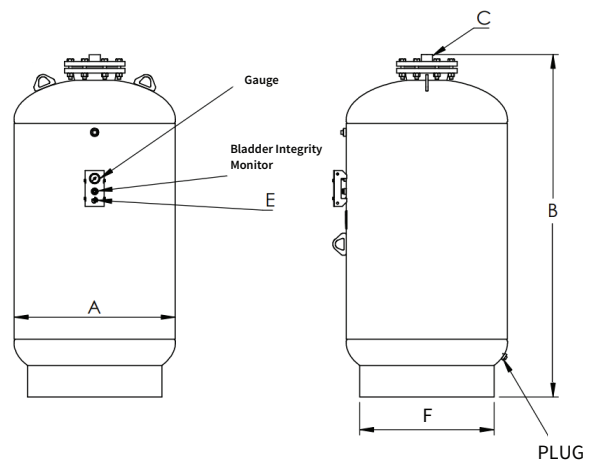
NEXP-10 TO NEXP-13



NEXP-23 TO NEXP-211



NEXP-264 TO NEXP-3963

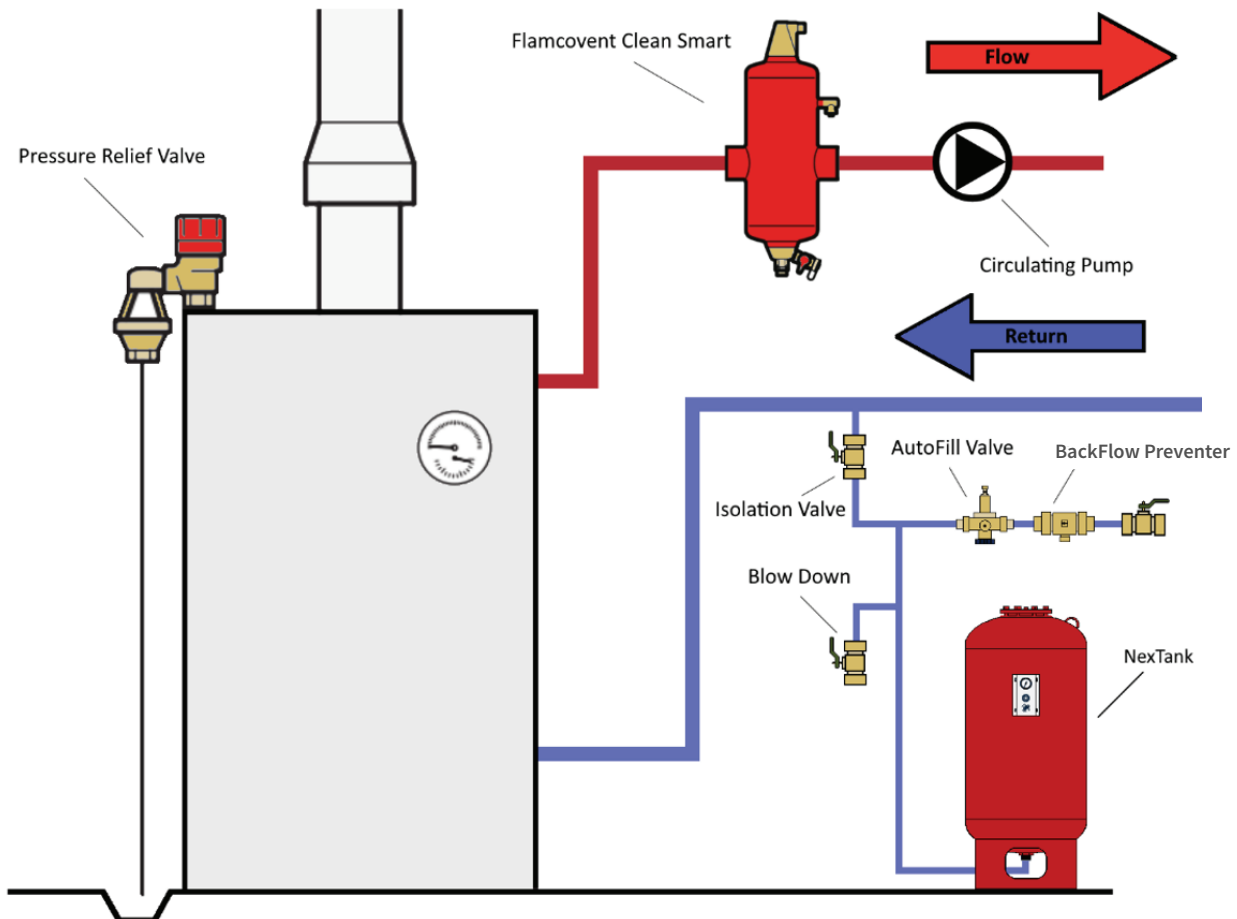


MODEL	GALLONS	DIMENSIONS (IN.)								SHIPPING WEIGHT (LBS)
		A	B	SYSTEM CONNECTION		CHARGING VALVE	F	G	PLUG	
				C	D	E				
NEXP-010	10	12	23.5	-	1 NPT	0.302" - 32NC	10	-	-	40
NEXP-013	13	14	24	-	1 NPT	0.302" - 32NC	10	-	-	50
NEXP-023*	23	16	37	1 NPT	1 NPT	0.302" - 32NC	12	5.5	-	90
NEXP-035*	35	20	37	1 NPT	1 NPT	0.302" - 32NC	16	5.5	-	125
NEXP-053*	53	24	43	1.5 NPT	1 NPT	0.302" - 32NC	20	5.25	-	210
NEXP-079*	79	24	55	1.5 NPT	1 NPT	0.302" - 32NC	20	5.25	-	225
NEXP-106*	106	30	49	1.5 NPT	1 NPT	0.302" - 32NC	24	5.25	-	300
NEXP-132*	132	30	57	1.5 NPT	1 NPT	0.302" - 32NC	24	5.25	-	335
NEXP-158*	158	30	65	1.5 NPT	1 NPT	0.302" - 32NC	24	5.25	-	360
NEXP-211*	211	32	76	1.5 NPT	1 NPT	0.302" - 32NC	28	5.25	-	475
NEXP-264	264	36	76	1.5 NPT	-	0.302" - 32NC	30	-	0.75 NPT	552
NEXP-317	317	36	88	1.5 NPT	-	0.302" - 32NC	30	-	0.75 NPT	679
NEXP-370	370	36	100	1.5 NPT	-	0.302" - 32NC	30	-	0.75 NPT	688
NEXP-422	422	48	74	1.5 NPT	-	0.302" - 32NC	42	-	0.75 NPT	1,046
NEXP-528	528	48	86	1.5 NPT	-	0.302" - 32NC	42	-	0.75 NPT	1,150
NEXP-660	660	48	104	2 NPT	-	0.302" - 32NC	42	-	0.75 NPT	1,444
NEXP-792	792	60	83	2 NPT	-	0.302" - 32NC	54	-	0.75 NPT	1,868
NEXP-1056	1,056	60	105	2 NPT	-	0.302" - 32NC	54	-	0.75 NPT	2,238
NEXP-1320	1,320	60	128	2 NPT	-	0.302" - 32NC	54	-	0.75 NPT	2,617
NEXP-1980	1,980	72	131	3 NPT	-	0.302" - 32NC	66	-	1 NPT	3,768
NEXP-2640	2,640	72	162	3 NPT	-	0.302" - 32NC	66	-	1 NPT	4,628
NEXP-3963	3,963	72	233	3 NPT	-	0.302" - 32NC	66	-	1 NPT	5,925

Installation

- Inspect the Expansion Tank for any visual damage that may have occurred during transit. If any damage is found **DO NOT INSTALL THE TANK.**
 - a. Bladder tanks are shipped from our warehouse with an air pre-charge. Damaged tanks can be extremely dangerous.
- Before connecting the expansion tank to the system, check the air pre-charge pressure using the pressure gauge located on the front of the tank. Pressure adjustments can be made via the charging valve (labeled E).
 - a. If the factory set pre-charge does not match the calculated pre-charge for the installation it must be adjusted. The water side of the tank should be empty during adjustment.
- Once satisfied with the Pre-Charge the expansion tank may now be connected to the system
 - a. NEXP-10 & NEXP-13 system connection is located at the top of the tank labeled D (Fig 1.)
 - b. NEXP-023 thru NEXP-211 have 2 system connections, one at the top (D) and one at the bottom of the tank (C) (Fig 2.). Either connection point can be used to connect to the system.
 - c. NEXP-264 thru NEXP-3963 have a single system connection located at the top of the tank labeled C (Fig 3.).
- The NexTank should be installed in the return line, as close as possible to the boiler, on the intake side of the pump. Install the tank so that the water it contains cannot circulate.

Note: It is recommended that an isolation valve and blow down is installed local to the expansion tank such that it can be isolated from the hydronic system for routine servicing and during hydrostatic testing. See below diagram for example of possible installation.



Maintenance and service

The NEX Tank should be checked periodically (at least once per year) to ensure the pre-charge is properly maintained. Changes in pre-charge pressure can significantly alter the tanks performance and reduce the life expectancy of the bladder. If it appears that a bladder tank is not operating correctly, check the tank's air pre-charge:

- Isolate the tank from the piping system (close ball valve from tank to system).
- Drain the tank fluid (preferably with a drain located between ball valve and tank). Leave drain valve open.
- Check the tank's pressure by reading the pressure gauge on the front of the tank
- If the pressure is less than the system fill pressure (or specified value), add air to the tank via the Schrader valve located on the front of the Tank. Use caution when using an air compressor or pump and follow compressor manufacturer's instructions/safety warnings. As air is added, note the discharge from the open drain.
 - a. If water comes through the drain, continue adding pressure as needed to evacuate the water from the tank. Re-check the pre-charge pressure and adjust as necessary to meet desired level.
 - b. If air comes through the drain, there is a tear or hole in the bladder. The bladder will need to be replaced (refer to bladder replacement instructions).
- Release air if the pressure is above the desired level. Check for leaks in the air charging system by dripping a soap solution on the air charging valve.
- Open valve to the system to place the tank into operation. If tank pressure drops abnormally, the bladder inside the tank may have a tear or hole in it. Repeat the operations above to verify a leak or no leak is seen.

Note:

There is a bladder integrity monitor located on the front of the expansion tank, should the indicator have changed from white to pink this is an indication that the bladder may have a tear or hole and require replacement.

Environment



Observe local code requirements when disposing of the Nex Tank.

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