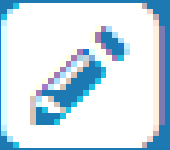


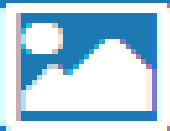
# Quick Reference



= Help Button



= Estimator Button



= Diagram Button



Calculate & Use

= Action Button

in inches

= Data Entry Field

# Tank Size Calculator

Select a type of tank to calculate the size needed for your installation:

Expansion

Thermal Expansion

Hydropneumatic



Select Tank Type

Help

# Critical Sizing - Expansion

System Volume

volume in gallons



System Volume Estimator  
(See Next Page)

Fluid Type

Water



Water  
Propylene  
Ethylene

Low Temperature

temperature in ° F



High Temperature

temperature in ° F



Help

Initial Pressure

pressure in PSIG



Initial Pressure Estimator

Final Pressure

pressure in PSIG



Final Pressure Estimator



Calculate



Reset



Back

Click to enter variables manually

Select volume calculation method:

Building Size

Boiler Capacity

Chiller Tonnage

Click to select estimation method

Height

in feet

Width

in feet

Depth

in feet

System's Main Supply Diameter

in inches



Diagram

Click to enter variables manually

System Volume:

Estimated System Volume



Calculate & Use

Cancel

Click to use estimated volume

## Calculated Critical Sizing

Required Tank Volume

39.8

Tank Volume

Bladder: 39.8 gallons

Diaphragm: 39.8 gallons

Compression: 66.9 gallons

Minimum Required  
Tank Volume

Minimum Required Tank  
Volume By Tank Type

## Recommended Products

Bladder

NLAP 150 (ASME)

NLA 200 (ASME)

NL 90VL (NON-ASME)

Diaphragm

NTA 80 (ASME)

N-90V (NON-ASME)

Compression

20NA62 (ASME)

Recommended Tank  
Models By Tank Type



Back to Calculator

# NLAP 150

View product information:

View Submittal

View I & O Manual

View Brochure

Request Quote



View Other Products

**submittal**  
NLAP-SERIES  
HYDRONIC EXPANSION TANKS

Model: NLAP-40 thru NLAP-1100  
Submitted Sheet No. A-10002 Date: 6/13

Job Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Location: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
Engineer: \_\_\_\_\_ Order No. \_\_\_\_\_ Date: \_\_\_\_\_  
Contractor: \_\_\_\_\_ Notes: \_\_\_\_\_  
Sales Rep. \_\_\_\_\_

**Description**  
Wessels NLAP tanks are ASME removable bladder type pre-charged expansion tanks. They are designed to absorb the expansion forces and control the pressure in heating/cooling systems. The system's expanded water (fully compatible with water/glycol mixtures) is contained in a heavy-duty bladder preventing tank corrosion and waterlogging problems. All NLAP expansion tanks can be installed vertically or horizontally.

**Construction**  
Shell: Carbon Steel  
Bladder: Heavy Duty Butyl  
System Connection: Carbon Steel

**Performance Limitations**  
Maximum Design Temperature: 210°F  
Maximum Design Pressure: 125 PSIG\*  
\*100 & 250 PSIG available

Model Number	Flat Number	Tank Volume (Gallons)	Tagging Information	Quantity
NLAP-40	225-10040	11		
NLAP-60	225-10060	15		
NLAP-80	225-10080	25		
NLAP-100	225-10100	30		
NLAP-150	225-10150	58		
NLAP-200	225-10200	88		
NLAP-250	225-10250	118		
NLAP-300	225-10300	158		
NLAP-400	225-10400	218		
NLAP-500	225-10500	278		
NLAP-600	225-10600	338		
NLAP-700	225-0700	418		
NLAP-815	225-0815	518		
NLAP-950	225-0950	650		
NLAP-1100	225-1100	850		

**Typical Specifications**  
Finish and install, as shown on plans, a \_\_\_\_\_" diameter x \_\_\_\_\_" (NPS) pre-charged steel expansion tank with heavy-duty bladder. The tank shall have NPT system connections and a 3/32"-32 charging valve connection (standard tire valve) to facilitate the on-site charging of the tank to meet system requirements. The tank shall be filled with nitrogen gas and a floor mounting skirt for vertical installation. The tank must be constructed in accordance with most recent edition of Section VIII Division 1 of the ASME Boiler and Pressure Vessel Code.

Each tank shall be Wessels model number NLAP-\_\_\_\_\_, \_\_\_\_\_ or approved equal.  
101 TANK ST • GREENWOOD, IN 46143 • (317) 888-9800 • (317) 888-9898 FAX • www.westank.com

**INSTALLATION & OPERATION**

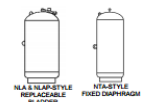
TYPE: ASME PRE-PRESSURIZED EXPANSION TANKS FOR HEATING & COOLING SYSTEMS

MODEL(S): NLA, NLAP & NTA SERIES  
JD Sheet No. 05HEATS1 Date: 3/03

**VESSEL DESCRIPTION**  
Wessels Type NLA, NLAP & NTA Tanks are ASME constructed, pre-charged expansion tanks. They are designed to absorb the expansion forces and control the pressure in heating/cooling systems. The system's expanded water (fully compatible with water/glycol mixtures) is contained in a heavy-duty bladder preventing tank corrosion and waterlogging problems. The factory set pre-charge for these tanks is 12 psig.

**CONSTRUCTION**  
Shell: Carbon Steel  
Bladder/Diaphragm: Heavy duty butyl  
Exterior: Primer paint

**PERFORMANCE LIMITATIONS**  
Maximum Design Temperature: 210°F  
Maximum Design Pressure: 125 PSIG\*  
\*100 & 250 PSIG available



Visually inspect tank for damage, which may occur during transit.  
Factory pre-charge pressure may not be correct for the installation.  
Tank MUST be pre-charged to system design fill pressure BEFORE placing into operation. Remove pipe plug covering the valve enclosure. Check and adjust the charge pressure by adding or releasing air for each application.  
If the system has been filled, the tank must be isolated from the system and the tank emptied before charging. This ensures the fluid has exited the bladder and proper charging will occur.  
If the pre-charge adjustment is necessary, oil and water free compressed air or nitrogen gas may be used. Check the pre-charge using an accurate pressure gauge at the charging valve and adjust as required. Check air valve for leakage. If evident, replace the Schrader-type tire valve core. Do not depend on the valve cap to seal the tank. After making sure air charge is correct, replace pipe plug over charging valve for protection.  
Set tank in place and pipe system connection to system. Be sure to include isolation valve(s) and drain. Do not tested runs on cover plate (NLA & NLAP models) - this will result in loss of pre-charge. Cover plate should only be removed when replacing bladder, and then only after the tank has been filled to zero gauge pressure.  
Purge air from system BEFORE placing tank into operation. All models have system water contained inside bladder.  
When filling the system with water, open valves to tank to ensure that any residual air in the tank is displaced by water.  
It is recommended that the pre-charge be checked annually to ensure proper system protection and longevity for the vessel.  
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Request Quote  
Tank Type: Expansion  
System Volume: 1100  
Fluid Type: water  
Glycol Percentage: ---  
Low Temperature: 60  
High Temperature: 85  
Initial Pressure: 10  
Final Pressure: 12

See more about: quotes@westank.com

