



DATA CENTER & COMMERCIAL HVAC

PL-EXT SERIES — BLADDER EXPANSION TANKS

PRESSURE. CONTROLLED. PROTECTED.

Thermal expansion in a closed chilled water system is predictable – uncontrolled, it damages pumps, opens relief valves, and compromises system integrity. The Novus PL-EXT Series bladder expansion tanks absorb that expansion precisely, maintaining system pressure within design bounds across every operating cycle.



150 PSIG
DESIGN PRESSURE @ 200°F

ASME
U STAMP ALL SIZES

ISO
9001 CERTIFIED



FULL-ACCEPTANCE EPDM BLADDER

Full-volume bladder accepts the complete nominal vessel volume – system water never contacts the carbon steel shell. EPDM standard; butyl rubber available for glycol or high-temperature heating water service.



FIELD-REPLACEABLE BLADDER

Bladder is removable and replaceable in the field without removing the vessel from service piping. No vessel isolation or drainage required. Written replacement procedure included with every vessel.



ASME U STAMP — ALL SIZES

Every PL-EXT vessel bears the ASME U Certification Mark and is National Board registered prior to shipment. Authorized Inspector witnessed hydrotest, ASME Form U-1 on every vessel.



FACTORY PRE-CHARGED & CERTIFIED

Pre-charge pressure set and verified at the factory to match system fill pressure, documented on the nameplate and factory certification. Schrader access valve with insulation fitting for field verification.



ALUMINUM INSULATION JACKETING

Factory-applied closed-cell polyurethane foam (min. 2 in., R-12) beneath 0.024-in. aluminum / Kynar polymer jacket – UV-stable, weather-sealed, and rated for continuous outdoor exposed installation.



MULTI-SERVICE FLEXIBILITY

Chilled water, heating water, and industrial process cooling in a single vessel family. 150 PSIG standard; 300 PSIG high-pressure option on all models. NSF/ANSI 61 bladder available for potable water service.

GET MORE INFORMATION / QUOTE

✉ info@novusprocess.com
☎ (432) 333-4591



BLADDER / EXPANSION TANKS — CORE COMMERCIAL



SPECIFICATION	PL-EXT-48X8	PL-EXT-54X10	PL-EXT-60X12.5
NOMINAL VOLUME (GROSS)	850 Gallons	1,300 Gallons	2,000 Gallons
NOMINAL DIAMETER (OD)	48 in. (4 ft 0 in.)	54 in. (4 ft 6 in.)	60 in. (5 ft 0 in.)
SHELL LENGTH (S-S)	8.0 ft	10.0 ft	12.5 ft
OVERALL LENGTH	10.0 ft	12.2 ft	15.0 ft
DESIGN STANDARD	150 PSIG @ 200°F 300 PSIG High-Pressure Option Available		
AIR CHARGING VALVE	½-in. Schrader-Type - Factory Pre-Charged, Insulation Access Fitting Provided		
NOZZLE STANDARD	ANSI/ASME B16.5 Class 150 RF Flanged (Class 300 for 300 PSIG Service)		
HEAD / SHELL MATERIAL	SA-516 Gr. 70 Carbon Steel — Single-Wall Construction		
BLADDER (STANDARD)	EPDM Rubber — Full-Acceptance, Suspended, Field-Replaceable		
BLADDER (OPTIONAL)	Butyl Rubber — Glycol Service, High-Temp Heating Water		

APPLICATIONS

✔ Data center / campus chilled water plant thermal expansion and pressure control

✔ Commercial HVAC chilled and heating water closed-loop pressure stabilization

✔ Variable flow chilled water systems - pump suction pressure stabilization

✔ District cooling and central energy plant primary loop expansion control

✔ Industrial process cooling - pressure stabilization for manufacturing / oil & gas

✔ Potable water service where NSF/ANSI 61-G bladder certification is required

ENGINEERING DELIVERABLES

✔ ASME Code calculations - full U-1 Data Report and MDR

✔ Acceptance volume sizing per ASHRAE HVAC Systems Handbook Ch. 12

✔ Factory pre-charge pressure certification matched to system fill pressure

✔ P&ID coordination - system connection, drain, gauge tap, relief valve schedule

✔ Insulation R-value calculation and thermal performance documentation

✔ NDE records: radiography, UT, PT/MT nozzle welds, hydrostatic test with AI signature

ASME SEC. VIII DIV. 1

ISO 9001 CERTIFIED

NATIONAL BOARD REGISTERED

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