



CHILLED WATER BUFFER TANK SERIES

STABLE. PROTECTED. RELIABLE.

Short-cycling is one of the most damaging and costly failure modes in a chilled water plant degrading compressors, elevating maintenance costs, and reducing system reliability.

The Novus Process Systems Buffer Tank Series introduces the hydraulic volume needed to extend chiller run times and protect equipment. Each vessel is factory-insulated with closed-cell polyurethane foam beneath jacketing.



125 PSIG
DESIGN PRESSURE @ 200°F

ASME
U STAMP + NATIONAL BOARD

ISO
9001 CERTIFIED



SHORT-CYCLE ELIMINATION

Introduces critical hydraulic volume between the chiller and the system, extending minimum run times and protecting compressors from rapid, damaging on-off cycling that degrades equipment life.



INTERNAL DISTRIBUTION BAFFLE

Solid carbon steel baffle separates supply and return connections, forcing chilled water through the full vessel volume and eliminating short-circuit flow paths that reduce effective buffer capacity.



SKIDDED CONFIGURATION AVAILABLE

Available as a factory-built skidded assembly - structurally engineered skid frame with pre-positioned vessel, reducing field installation labor and expediting central plant project schedules.



VERTICAL & HORIZONTAL ORIENTATION

Available in vertical or horizontal configuration, engineered to fit space-constrained mechanical rooms, and central plant layouts.

GET MORE INFORMATION / QUOTE

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



CHILLED WATER BUFFER TANKS



SPECIFICATION	BT-5000	BT-10000	BT-20000
VOLUME CAPACITY	5,000 Gallons	10,000 Gallons	20,000 Gallons
NOMINAL DIAMETER	72 in. (6 ft 0 in.)	96 in. (8 ft 0 in.)	120 in. (10 ft 0 in.)
NOMINAL LENGTH (S-S)	22 ft	24 ft	31 ft
TOTAL HEIGHT (VERTICAL CONFIGURATION)	28 ft	31 ft	39 ft
DESIGN STANDARD	ASME Section VIII, Div. 1 (2025) ANSI/AWWA D100-21		
DESIGN PRESSURE (INTERNAL)	125 PSIG @ 200°F		
MIN. DESIGN METAL TEMPERATURE	-20°F @ 125 PSIG		
ORIENTATION	Vertical (standard) Horizontal (upon request)		
SHELL / HEAD MATERIAL	SA-516 Gr. 70 Carbon Steel		
INTERNAL BAFFLE	Carbon Steel - Full-Volume Mixing / Flow Distribution		
INSULATION SYSTEM	Closed-Cell Polyurethane Foam - Aluminum Jacket		
SKIDDED OPTION	Factory-Built Structural Steel Skid Assembly - Available on All Sizes		

APPLICATIONS

✔ Chilled water plant buffer volume - chiller short-cycle protection

✔ Variable flow system buffer for chiller minimum flow protection

✔ Data center, hospital, and campus central chilled water plants

✔ Industrial process chilled water buffering - semiconductor fabs, pharma

✔ District cooling plant integration and load equalization

ENGINEERING DELIVERABLES

✔ ASME Code calculations - full U-1 Data Report and Manufacturer's Data Report (MDR)

✔ P&ID review and nozzle schedule coordination with EPC / mechanical contractor

✔ Insulation R-value calculation and thermal performance documentation

✔ Distribution baffle verification - full volume turnover and mixing confirmation

✔ NDE documentation: radiography, UT, and hydrostatic test records

✔ Skid structural drawings - AISC-compliant, PE-stamped upon request

ASME SEC. VIII DIV. 1

ISO 9001 CERTIFIED

NATIONAL BOARD REGISTERED

GET MORE INFORMATION / QUOTE

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

