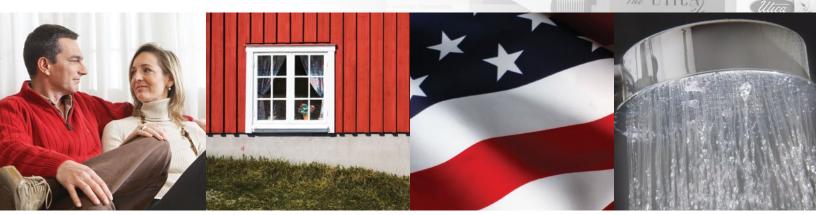


# There Are Some Things You Can Always Depend On...

\* Radiant heat in every room





## THE UTICA H<sub>2</sub>O SERIES

A complete line of Stainless Steel, Single and Dual Coil Indirect Water Heaters, Storage Tanks, and Hydronic Buffer Tanks.

Need An Easy Domestic Hot Water Solution With A Low Operating Cost and the Longevity Of Stainless Steel?

Utica H<sub>2</sub>O Stainless Steel Single Coil Indirect Water Heaters

Need A Hot Water Solution To Balance Input and Storage While Reducing Short Cycling?

Utica H<sub>2</sub>O Stainless Steel Storage Tanks

Need A Hot Water Solution For Use With Chillers, Heat Pumps, and Low Mass Boilers?

Utica H<sub>2</sub>O Stainless Steel Hydronic Buffer Tanks

Need A Hot Water Solution For Solar Applications Or Small Zones?

Utica H<sub>2</sub>O Stainless Steel Single & Dual Coil Solar Water Heaters

(Optional Electric Back-Up can heat the tank if solar heat is unavailable)

Stainless Hadiness Stainless Hadiers

STANDARD FEATURES	Silva			
Capacities (Gallons)	30, 40, 40L, 50 , 60, 60L, 80, 85* & 115			
316L Stainless Steel Construction	<b>^</b>			
Top Connections (For Easy, Neat, Clean Installation)	<b>^</b>			
Welded Stainless Steel Dip Tube (Factory installed)	<b>^</b>			
Thermoplastic Jacket (Won't dent, scratch or corrode)	<b>^</b>			
Low Pressure Drop (Ideal For Low Mass Boilers)	<b>^</b>			
Magnesium Anode Rod	<b>^</b>			
T & P Valve (Factory installed except on 85 & 115XHOC)	<b>^</b>			
Aquastat and Drain Valve Provided	<b>♠</b>			
2.25" EPS Insulation (Provides Less Than .5°F Per Hour Standby Loss)	<b>^</b>			
Large Diameter, Smooth Coil Heat Exchangers - Prevent Buildup (Stainless Steel Coils Are 25 to 30' Long and 1-1/8" in Diameter)	<b>^</b>			
Honeywell L4080B (Shipped Loose)	<b>6</b>			
Made in the USA	<b>^</b>			
WARRANTY				
Limited Lifetime Warranty (Residential), 5 Yr. (Commercial)	<b>^</b>			
15 Year Warranty (Residential)	N/A			
OPTIONS				
Low Profile	40L & 60L Capacities			
High Output	80 & 115 Capacities			
Extra High Output	85 & 115 Capacities			
Electric Back-Up	60, 80 & 115 Capacities			
Commercial Connections (For increased DHW flow)	80 & 115 Capacities (1-1/2" Dom., 1-1/4" Blr.)			
Coil	Standard			

<sup>\*</sup>Only offered in Extra High Output models.





Stainless Steeling

Stainless Tanks

Stainless Steolers

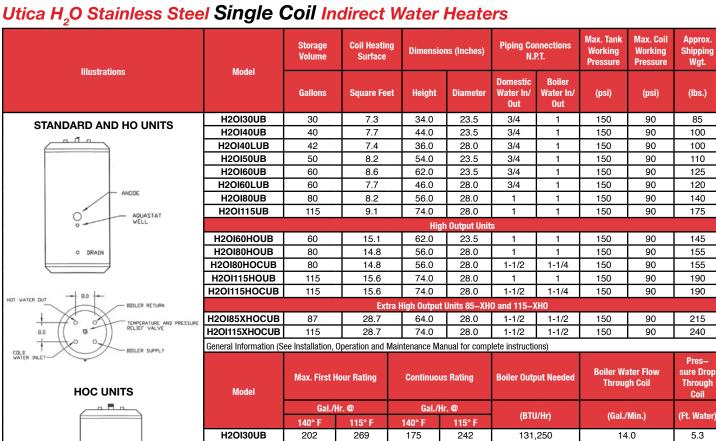
30, 40, 60, 60L, 80 & 115	22, 40, 60, 80 & 115	60, 80 & 115
6	<b>^</b>	lack
$\delta$	<b>^</b>	$\Diamond$
<b>6</b>	N/A	$\Diamond$
<b>^</b>	<b>^</b>	<b>^</b>
ń	<b>^</b>	<b>^</b>
N/A	N/A	N/A
6		$\Diamond$
<b>6</b>	<b>^</b>	<b>6</b>
<b>6</b>	<b>^</b>	â
N/A	N/A*	<b>6</b>
<b>6</b>	N/A	N/A
<b>6</b>	<b>^</b>	â
6	N/A	N/A
N/A	<b>^</b>	<b>^</b>
60L Capacities	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	60, 80 & 115 Capacities
80 & 115 Capacities (1-1/2")	40, 60, 80 & 115 Capacities (1-1/4", 1-1/2", 2") 22 Capacity (1-1/4" only)	N/A
N/A	22, 40, 60, 80 & 115 Capacities	Standard

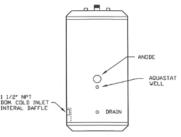


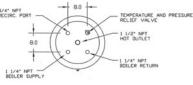




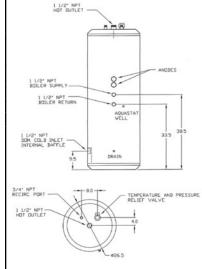








#### **XHOC EXTRA HIGH OUTPUT UNITS**



Model	Max. First Hour Rating		Continuo	us Rating	Boiler Output Needed	Boiler Water Flow Through Coil	Pres- sure Drop Through Coil		
	Gal./	Hr. @	Gal./	Hr. @	(DTU/UL)	(0 -1 (BE) - )	(Ft. 101 - 1 - 1)		
	140° F	115° F	140° F 115° F		(BTU/Hr)	(Gal./Min.)	(Ft. Water)		
H2OI30UB	202	269	175	242	131,250	14.0	5.3		
H2OI40UB	221	292	185	256	138,670	14.0	5.7		
H2OI40LUB	212	251	176	215	132,000	14.0	5.3		
H2OI50UB	223	291	178	246	133,280	14.0	6.0		
H2OI60UB	262	342	208	288	155,700	14.0	6.2		
H2OI60LUB	239	310	185	256	138,570	14.0	5.7		
H2OI80UB	271	248	199	276	149,390	14.0	6.0		
H2OI115UB	324	409	221	306	165,750	14.0	6.6		
		Hiç	gh Output Unit	s 60–H0, 80–H	10, and 115–H0				
H2OI60HOUB	406	541	352	478	263,600	14.0	10.1		
H2OI80HOUB	418	551	346	479	259,640	14.0	9.9		
H2OI80HOCUB	442	584	370	512	277,070	21.0	10.5		
H2OI15HOUB	467	607	364	504	273,100	14.0	15.8		
H2OI115HOCUB	479	623	376	520	281,800	21.0	16.7		
Extra High Output Units 85–XHO and 115–XHO									
H2OI85XHOCUB	738	992	660	914	495,000	28.0	13.0		
H2OI115XHOCUB	763	1017	660	914	495,000	28.0	13.0		
Note: All retings are be	and on 2000 E	hailar water ou	nnly and EOO E	cold water inle	+				

Note: All ratings are based on 200° F boiler water supply and 50° F cold water inlet. See installation manual for ratings at different temperatures and flow rates. Specifications subject to change without notice.

Standard Equipment

**Options** 

Smooth stainless steel coil, magnesium anode rod, factory installed stainless steel aquastat well, T & P and drain valve, welded stainless steel cold water dip tube factory installed and pressure tested, Honeywell L4080B aquastat shipped loose

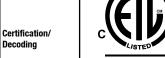
(L) Low profile models for applications with low clearances.

(C) Commercial models with larger tappings for higher flow rates.

(HO) High Output models available to meet greater demand.

(XHO) Extra High Output models.

Intertek







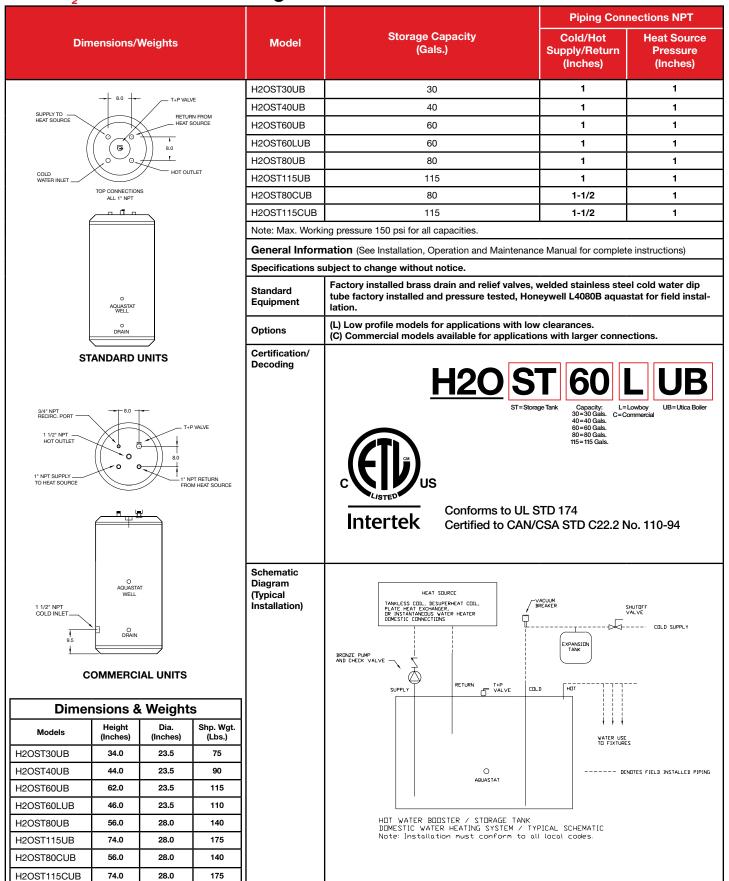




Capacity: 30=30 Gals. 40=40 Gals. 50=50 Gals. 400=40 Gals. 60=60 Gals. 80=80 Gals. 85=87 Gals. 85=87 Gals. 115=115 Gals

Conforms to UL STD 174 Certified to CAN/CSA STD C22.2 No. 110-94

### Utica H<sub>3</sub>O Stainless Steel Storage Tanks



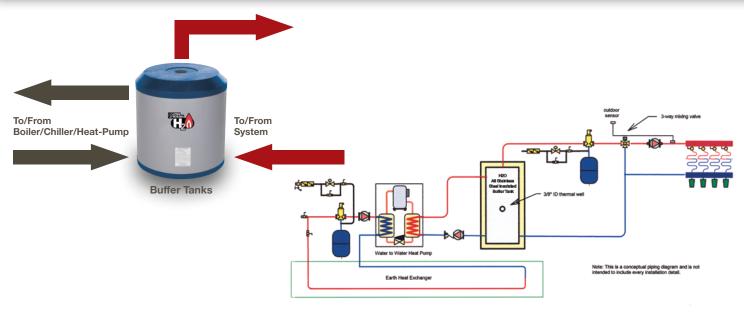
### Utica H<sub>2</sub>O Stainless Steel Buffer Tanks

Dimensions/Weights				Model	Storage Capacity (Gals.)	Piping Connections NPT (Inches)					
					H2OBT22114UB	22	1-1/4				
					H2OBT40114UB		1-1/4				
					H2OBT40112UB	40	1-1/2				
					H2OBT402UB		2				
					H2OBT60114UB		1-1/4				
					H2OBT60112UB	60	1-1/2				
					H2OBT602UB		2				
					H2OBT80112UB		1-1/4				
<b>-</b>	⊢— n ——					80	1-1/2				
	-				H2OBT802UB	12OBT802UB 2					
	+				H2OBT115114UB	BT115114UB 1-1/4					
					H2OBT115112UB	115	1-1/2				
					H2OBT1152UB		2				
					H2OBT40114WCUB		1-1/4				
A	• 3/8' ID HERMAL WELL		4 00111		H2OBT40112WCUB	40	1-1/2				
В	HERMAL WELL	_		GHT SIDE	H2OBT402WCUB		2				
		•	2 ON L3	FT SIDE P	H2OBT60114WCUB		1-1/4				
	DRAIN VALVE		1 011 10	'	H2OBT60112WCUB	60	1-1/2				
		)			H2OBT602WCUB		2				
<u>†</u>	1				H2OBT80114WCUB	H2OBT80114WCUB					
					H2OBT80112WCUB	80	1-1/2				
					H2OBT802WCUB		2				
					H2OBT115114WCUB		1-1/4				
					H2OBT115112WCUB	115	1-1/2				
					H2OBT1152WCUB	, l					
					Note: Max. Working pressure 60 psi for all capacities.						
					General Information (See Installation, Operation and Maintenance Manual for complete instructions)						
		Specifications subject	Specifications subject to change without notice.								
					Standard Equipment Factory installed brass drain and relief valves, welded stainless steel cold water dip tube factory installed and pressure tested, Honeywell L4080B aquastat for field installation.						
Dime	ension	s & We	iahte		Options	(WC) With Coil					
	Height	l			Certification/						
Model	A (Inches)	B (Inches)	C (Inches)	Shp. Wgt. (Lbs.)	Decoding	H2O BT 40 1	14 WC UB				
H2O22BT114UB	24.5	15.0	8.0	35 (45 WC)		BT=Buffer Tank Capacity: 114	4=1-1/4"NPT WC=With Coil UB=Utica Boiler				
H2O40BT114UB						22=22 Gáls. 112 40=40 Gáls. 60=60 Gáls.	2=1-1/2" NPT 2=2" NPT				
H2O40BT112UB	42.0	29.0	9.0	87 (97 WC)		80=80 Gals.					
H2O40BT2UB											
H2O60BT114UB											
H2O60BT112UB	42.0	29.5	9.5	115 (125 WC)							
H2O60BT2UB						c					
H2O80BT114UB				105		LISTED					
H2O80BT112UB	52.0	39.5	9.5	125 (135 WC)		Conforms to U					
H2O80BT2UB						Intertek Certified to CA	AN/CSA STD C22.2 No. 110-94				
H2O115BT114UB				160							
H2O115BT112UB	72.0	59.5	.5 9.5	59.5 9.5		9.5 (170 WC)					
H2O115BT2UB											

#### UTICA HO STAINLESS STEEL BUFFER TANKS

- Reduces chiller or boiler short cycling
   (Short cycling results in reduced operating efficiency and shorter equipment life)
- · Used in systems having several low BTU cooling or heating loads calling at different times
- Full size tappings on buffer tank for peak performance (1-1/4", 1-1/2", and 2")
- · Used in systems operating below the design load condition, which is most of the time.

### H<sub>2</sub>O HYDRAULICALLY DECOUPLED



#### Hydronic Buffer Tank applied to Water source heat pump application

#### Buffer Tank Sizing - Calculating Capacity

Utica H<sub>2</sub>O buffer tanks are a simple, cost effective way to improve overall system efficiency by reducing unnecessary equipment short cycling. The recommended capacity or volume of a buffer tank is based on four variables.

- 1) The duration of the heating or cooling source "on time" (minutes). The desired length of "on time" for each run cycle depends on the type of equipment used. Heat pump and chiller manufacturers typically recommend a minimum of 5 to 10 minutes on time, and boiler manufacturers may recommend a minimum of 10 minutes "on time". Check with your equipment manufacturer. Generally, the longer the "on time", the higher the overall operating efficiency.
- 2) The minimum rate of heat input (BTU/HR). This is based on the heat pump or chiller output, or the boiler output at the minimum firing rate if the boiler has a variable input system that ramps input down as the demand decreases.
- 3) The minimum system load (BTU/HR). This is the demand placed on the system with the smallest zone calling for heat.
- 4) The allowable tank temperature rise (deg. F). This varies depending on the type of heating or cooling system used, and on the design of the distribution system. Chillers may require a tight, (6 deg. F), differential to assure good dehumidification and prevent freezing, heat pumps may require a (10 deg. F) differential to maintain a high COP, and boilers with hydronic heating distribution systems may require a differential anywhere between 10 to 40 deg. F depending on the application.

The following formula determines the tank volume:

# $V = \frac{T \times (Q \text{ heat input - } Q \text{ min. heat load})}{T \text{ank temp. rise } \times 500}$

V = Buffer tank volume (gallons)
Q heat source = heat source output (BTU/HR)
Tank temp rise (deg. F)

T = desired heat source "on cycle" (min.) Q min. heat load = heat output to minimum load

Water to Water Heat Pump Example:

Town and Country Mechanical wants a minimum heat pump on time of 10 minutes. The heat pump output is 46,500 BTU/HR. The smallest zone is a 7,000 BTU/HR bathroom. The allowable temperature differential is 90 to 100 deg. F for the radiant heat zones.

$$V = \frac{10 \times (46,500 - 7,000)}{(100-90) \times 500} = 79.0 \text{ Gallons minimum volume. Choose the H2O80BT buffer tank.}$$

### Utica H<sub>2</sub>O Stainless Steel Dual and Single Coil Solar Water Heaters

Dimensions/Weights	Model	Storage Capacity (Gals.)				Top Coil Heating Surface Sq. Ft.		Bottom Coil Heating Surface Sq. Ft.	Piping Connections NPT (Inches)
	SINGLE COIL								
TOP COIL SUPPLY TOP COIL RETURN	H2OI60EUB	60				1	N/A	8.3	1
COLD — HOT MATER	H2OI80EUB	80			N/A		8.0	1	
WATER IN O B O OUT OUT OUT OUT OUT OUT OUT OUT OUT O	H2OI115EUB	115				N/A	8.9	1	
BOTTOM SOLAR- COIL RETURN		DUAL COIL							
	H2OI60DUB	60				7.4		8.3	1
	H2OI80DUB	80			7.4		8.0	1	
TOP COIL 3/8" ID THERMAL WELL	H2OI115DUB	115			7.4		8.9	1	
0 1/2" NPT RECIPIC. RETURN PORT	H2OI60DEUB		6	0			7.4	8.3	1
TOP HEATING COIL FOR BACKUP	H2OI80DEUB		8	0			7.4	8.0	1
BOTTOM COIL 3/8" IO THERMAL WELL	H2OI115DEUB		11	15			7.4	8.9	1
39 ID IHERMAL WELL	Note: Max. Work	king pressi	ure 150 ps	i for all ca	pacities.				
BOTTOM HEATING COIL FOR SOLAR	General Infor	mation (	See Installa	ation. Ope	ration and	Maintenanc	e Manual for c	omplete instruction	ns)
DUAL COIL UNITS	Model	Max. First Hour Rating Gal./Hr. @		Continuous Rating Gal./Hr. @		Max. Rec. Bottom		Min. Boiler Water Flow Through	Pressure Drop Through Coil
		Gai.,				Coil	0011	Coil	0011
		140° F	115° F	140° F	115° F	(Gal./Hr.)	(Gal./Hr.)	(Gal./Min.)	(Ft. Water)
	SINGLE COIL								
r 1.5	H2OI60EUB	45.9	52.0	15.9	22.0	N/A	214	10.0	3.5
	H2OI80EUB	55.9	62.0	15.9	22.0	N/A	214	10.0	3.6
	H2OI115EUB	73.9	80.0	15.9	22.0	N/A	214	10.0	3.9
4" X 10"	LIOCICODI ID	45.0	500	45.0		UAL COIL	044	100	0.5
ELECTRICAL BOX	H2OI60DUB	45.9	52.0	15.9	22.0	185	214	10.0	3.5
	H2OI80DUB	55.9	62.0	15.9	22.0	180	214	10.0	3.6
3/8" ID THERMAL WELL	H2OI115DUB H2OI60DEUB	73.9	80.0 52.0	15.9 15.9	22.0	190	214	10.0 10.0	3.9
DRAIN VALVE	H2OI80DEUB	45.9 55.9	62.0	15.9	22.0	185 180	214	10.0	3.5
	H2OI115DEUB	73.9	80.0	15.9	22.0	190	214	10.0	3.9
								nlet. For Dual Co	
ELECTRIC BACKUP UNITS								change without n	
Dimensions & Weights  Models Height Dia. Shp. Wgt. (Inches) (Inches)	Standard Equipment	Factory installed brass drain and relief valves, welded stainless steel cold water dip tube factory installed and pressure tested, Honeywell L4080B aquastat for field installation (single coil only). Removable thermal well to accept a solar control thermostat or thermistor. Dual coil units equipped with two aquastat wells which control each coil independently and built-in recirculation tapping. Units with Electric Back-Up are provided with 4" x 10" electrical box with pre-wired heating element, thermostat, and hi-limit. All electric back-up units provided with 240 volt AC, 3500 watt element.							
SINGLE COIL	Options	(E) Elect	ric Back-l	Up model	s for supp	lemental he	eating.		
H2OI60EUB         62.0         23.5         135           H2OI80EUB         56.0         28.0         145           H2OI115EUB         74.0         28.0         180           DUAL COIL           H2OI60DUB         62.0         23.5         165           H2OI80DUB         56.0         28.0         175	Certification/ Decoding			м	<u>H2</u>	20 I	General Genera	D=Dual Coil E=Electri Back u (3500 We	p
H2OI115DUB     74.0     28.0     205       H2OI60DEUB     62.0     23.5     175       H2OI80DEUB     56.0     28.0     185       H2OI115DEUB     74.0     28.0     215		c V In	terte	us k		ns to UL S to CAN/C		22.2 No. 110-9 <sup>2</sup>	1

PN 240009329 Rev. 8/16



**ECR International**: 2201 Dwyer Ave., Utica, NY 13501 Tel: 315-797-1310 or 800-325-5479 Fax: 315-724-9319 www.ecrinternational.com



