



# UNI-PAC™ Deaerator System

For Use With Fire Tube or Water Tube Boilers

## UNI-PAC Deaerator System Features

- Two stage spray type deaeration utilizing **COCHRANE® by newterra Accuspray™** spray nozzles and atomizing valve
- Reduces dissolved oxygen concentration of boiler feed water to <7ppb
- Compact horizontal tank design for installation in tight spaces including reduced headroom
- Welded steel deaeration tank with **ASME Stamp**
- Fully integrated system with tank, piping, accessories pre-plumbed, pre-wired and pre-tested at **COCHRANE® by newterra** manufacturing plant
- Variable orifice self-regulating atomizing valve assures maintenance of energy required and guaranteed performance at rates of flow 10-100% of total capacity



## UNI-PAC Deaerator System Design Advantages

- **Designed for many applications** including colleges, hospitals, prisons, government buildings, industrial plants, military bases, etc.
- Systems come fully **factory tested** at **COCHRANE® by newterra** manufacturing facility
- Systems are fully pre-engineered for **quality assurance** and **fast delivery**



**COCHRANE**  
by newterra

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## Included Components

- COCHRANE® Atomizing valve
- Steam inlet control valve (supplied loose)
- Water inlet control valve assembly (supplied loose)
- Vacuum breaker
- Deaerator vent with orifice and valve
- Assembled level gauge with level transmitter, sight gauge, three level switches, isolation valves and piping to deaerator
- Pressure relief valve (Sentinel)
- Pressure relief valve (full system)
- Overflow control valve with fail open actuator and solenoid valve
- Pressure gauge
- Thermometer
- Two (2) 100% duty, low NPSH, vertical multi-stage boiler feed pumps
- Two (2) recirculation piping assemblies with fixed orifice, isolation valve and check valve
- Two (2) pump suction piping assemblies with isolation valve
- Two (2) pump discharge piping assemblies with isolation valve, pressure gauge, check valve
- NEMA 12 control panel complete with alarm lights, horn and silence button, microprocessor controller, motor starters and on/off selector switches for pumps

Model Code	Rating (lb/hr)	Steam Inlet Size	Tank OD	Tank SS	Tank OAL	Minutes to Overflow	Total Footprint Dimensions
UP-AH3-10	10,000	3"	4'-0"	9'-0"	11'-7"	23	H: 10'-8" W: 4'-10" L: 13'-6"
UP-AH3-20	20,000	3"	4'-0"	9'-0"	12'-9"	11	H: 11'-2" W: 5'-4" L: 14'-8"
UP-AH3-30	30,000	3"	4'-6"	11'-0"	12'-9"	13	H: 11'-2" W: 5'-4" L: 14'-8"
UP-AH3-40	40,000	3"	4'-6"	11'-0"	13'-11"	10	H: 11'-8" W: 5'-10" L: 15'-11"
UP-AH4-50	50,000	4"	5'-0"	12'-0"	13'-11"	12	H: 11'-8" W: 5'-10" L: 15'-11"
UP-AH4-60	60,000	4"	5'-0"	12'-0"	15'-1"	10	H: 13'-2" W: 6'-6" L: 17'-1"
UP-AH4-70	70,000	4"	5'-6"	13'-0"	15'-1"	12	H: 13'-2" W: 6'-6" L: 17'-1"
UP-AH4-80	80,000	4"	5'-6"	13'-0"	15'-1"	10	H: 13'-8" W: 6'-12" L: 17'-11"
UP-AH4-90	90,000	4"	6'-0"	13'-0"	15'-1"	12	H: 13'-8" W: 6'-12" L: 17'-11"
UP-AH4-100	100,000	4"	6'-0"	13'-0"	15'-1"	11	H: 13'-8" W: 6'-12" L: 17'-11"

## UNI-PAC™ Deaerator System

The COCHRANE® by newterra's Atomizing Deaerator is a **two-stage design**. In the first stage, water is sprayed in direct contact with steam and heated practically to saturation temperature. At this stage the bulk of the non-condensable gases are liberated and all released gases are discharged from the unit. The preheated, partially deaerated water then passes to the second stage where it comes in contact with a constant high velocity steam jet for final deaeration. The steam jet is created by a variable orifice atomizing valve which is self-compensating to changes in load or variation in operating conditions. The energy of the steam jet breaks up the water, producing a mist or fog of finely divided particles to assure maximum surface exposure to the scrubbing steam. Any remaining gas is removed and carried to the first stage by the steam, while the deaerated water falls to the storage section.



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