



# HURST

BOILER & WELDING CO., INC.

AVAILABLE WITH LOW NOX

## HURST SERIES OXYMISER

FEEDWATER DEAERATORS

Available from 5,000 to 200,000 LBS/HR

**GUARANTEED**

to Remove Oxygen in Boiler Feedwater to .005cc/liter

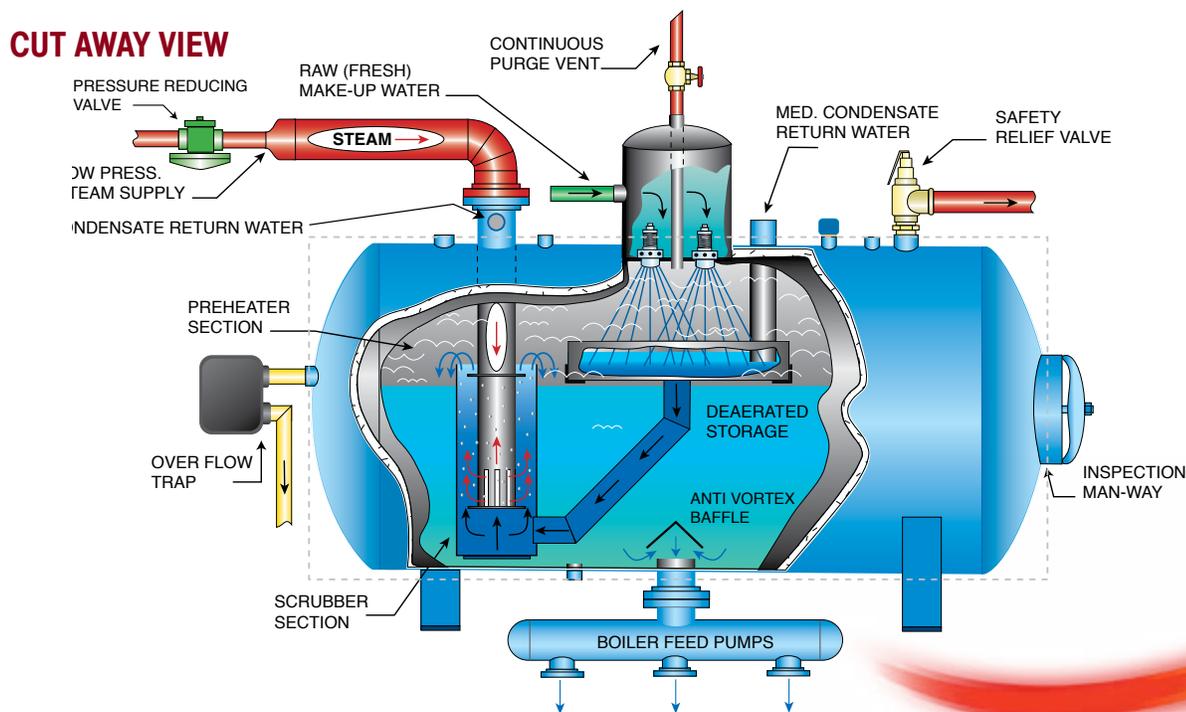


**SKID MOUNTED  
MODULAR PACKAGED**

*"Raise Feedwater Temperature and Reduce Operating Costs by Recovering Flash Steam when returned by High Temperature Condensate."*

**HURST PERFORMANCE SERIES BOILERS**

# SERIES OXYMISER

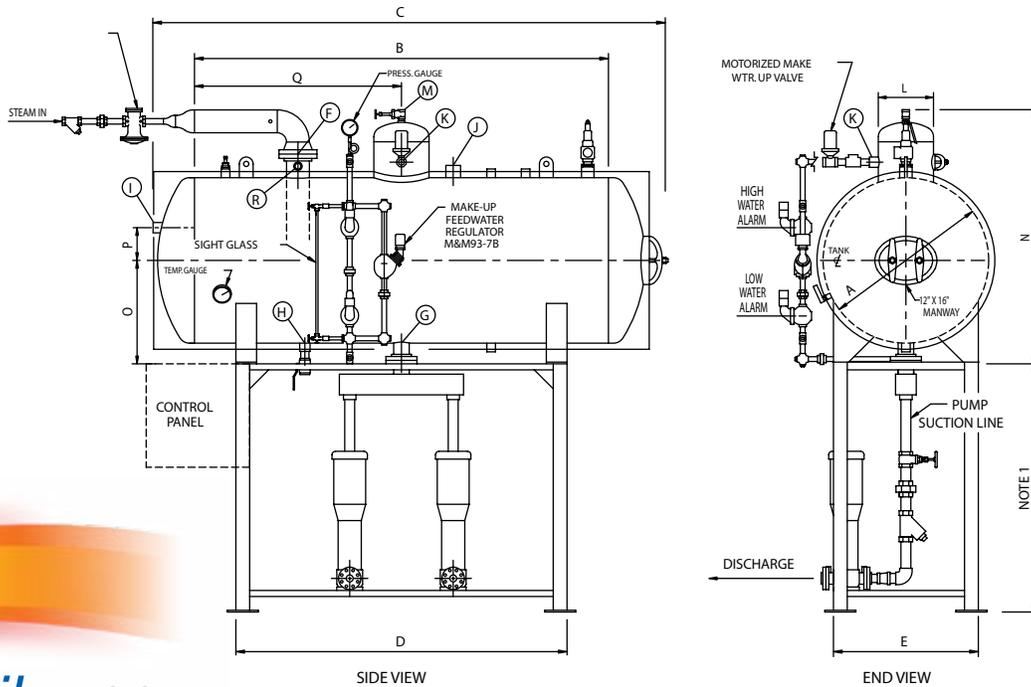


## SPECIFICATIONS

OXYMISER MODEL			OM-5	OM-7	OM-10	OM-12	OM-14	OM-16	OM-19	OM-22	OM-26		
STORAGE TO OVERFLOW	MINUTES		24.4	17.4	15.4	12.9	14.7	12.9	15.5	13.4	13.9		
DESIGN CAPACITY		LBS/HR	5000	7000	10000	12000	14000	16000	19000	22000	26000		
WATER CAPACITY	@ OVERFLOW	GAL	268	268	331	331	456	456	789	789	957		
WATER CAPACITY	@ NWL	GAL	194	194	233	233	312	312	498	498	609		
WATER CAPACITY (W/DOME)	FLOODED	GAL	354	354	435	435	565	656	850	850	1033		
WEIGHT (VESSEL ONLY)		LBS	2400	2400	2700	2700	3100	3100	3750	3750	4150		
<b>A</b>	TANK DIAMETER	IN	42	42	42	42	42	42	48	48	48	<b>A</b>	
<b>B</b>	TANK LENGTH	IN	48	48	60	60	84	84	96	96	120	<b>B</b>	
<b>C</b>	OVERALL LENGTH	BARE VESSEL	IN	73.5	73.5	86	86	105	105	122	122	142	<b>C</b>
<b>D</b>	SUPPORT STAND LENGTH	IN	46	46	54	54	72	72	84	84	96	<b>D</b>	
<b>E</b>	SADDLE WIDTH	IN	36	36	36	36	36	36	42	42	42	<b>E</b>	
<b>F</b>	STEAM INLET	150# FLANGE	IN	4	4	4	4	6	6	6	6	<b>F</b>	
<b>G</b>	WATER OUTLET	150# FLANGE	IN	3	3	3	3	4	4	4	6	<b>G</b>	
<b>H</b>	TANK DRAIN	IN	1.25	1.25	1.25	1.25	1.5	1.5	2	2	2	<b>H</b>	
<b>I</b>	OVERFLOW	IN	1.25	1.25	1.5	1.5	1.5	1.5	2	2	2	<b>I</b>	
<b>J</b>	MED. CONDENSATE RETURN	197-227 °F	IN	2	2	2	2	2.5	2.5	3	3	<b>J</b>	
<b>K</b>	INLET WATER/LOW CONDENSATE	UNDER 197 °F	IN	1.25	1.25	1.25	1.25	1.5	1.5	1.5	1.5	<b>K</b>	
<b>L</b>	DOME DIAMETER	IN	12	12	12	12	14	14	16	16	16	<b>L</b>	
<b>M</b>	STEAM PURGE VENT	IN	.75	.75	1	1	1	1	1	1	1	<b>M</b>	
<b>N</b>	TANK HEIGHT	FROM SUPPORT	IN	66	66	66	66	72	72	76	76	<b>N</b>	
<b>O</b>	BASE OF SADDLE TO C/L OF TANK	IN	27	27	27	27	29	29	30	30	30	<b>O</b>	
<b>P</b>	C/L TO OVERFLOW	IN	7.5	7.5	7.5	7.5	9	9	9.5	9.5	9.5	<b>P</b>	
<b>Q</b>	TO VENT CONNECTION	IN	24	24	30	30	42	42	48	48	60	<b>Q</b>	
<b>R</b>	HOT CONDENSATE RETURN	OVER 227 °F	IN	1	1	1	1	1.25	1.25	1.25	1.25	<b>R</b>	
OXYMISER MODEL			OM-5	OM-7	OM-10	OM-12	OM-14	OM-16	OM-19	OM-22	OM-26		

NOTE: SUPPORT STRUCTURE HEIGHT IS DEPENDENT ON NPSH. OF PUMP REQUIRED.

NOTE: WEIGHT= VESSEL ONLY WITH INSULATED JACKET, & STANDARD TRIM. DOES NOT INCLUDE PUMP STATION



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	OM-30	OM-35	OM-40	OM-50	OM-60	OM-80	OM-100	OM-125	OM-150	OM-200	
	12.0	11.3	12.1	12.7	12.7	11.6	9.8	11.3	10.8	10.3	
	30000	35000	40000	50000	60000	80000	100000	125000	150000	200000	
	957	1025	1214	1592	1922	2415	2712	3426	3913	4641	
	609	637	776	1049	1271	1552	1649	2299	2634	3582	
	1033	1091	1305	1673	2022	2521	2832	3935	4499	5956	
	4150	4300	4750	5400	5975	7885	8650	10445	11575	16900	
A	48	54	54	66	66	72	72	84	84	96	A
B	120	96	120	96	120	126	144	144	168	168	B
C	142	126	152	133	156	164	182	187	212	207	C
D	96	84	102	84	108	108	120	132	132	132	D
E	42	48	48	56	56	60	60	66	66	78.5	E
F	6	6	6	8	8	10	10	10	10	10	F
G	6	6	6	6	6	6	6	8	8	8	G
H	2	2	2	2	2.5	2.5	2.5	2.5	3	3	H
I	2	2	2	3	3	3	3	3	3	6	I
J	3	3	3	4	4	4	4	6	6	6	J
K	1.5	1.5	1.5	3	3	2.5	3	3	3	4	K
L	16	18	18	20	20	20	20	24	24	30	L
M	1	1	1	1	1	1	1	1	1	1.25	M
N	76	86	86	98	98	111	111	120	120	134	N
O	30	35	35	41	41	44	44	50	50	56	O
P	9.5	11.75	11.75	16	16	16	16	17	17	24	P
Q	60	48	60	48	60	63	72	72	84	84	Q
R	1.25	1.5	1.5	1.5	1.5	1.5	2.5	2.5	3	4	R
	OM-30	OM-35	OM-40	OM-50	OM-60	OM-80	OM-100	OM-125	OM-150	OM-200	

Inspected and registered with the National Board of Boiler & Pressure Vessel Inspectors.



Designed, constructed and stamped in accordance with the requirements of the ASME Boiler Codes.

ALL DIMENSIONS ARE IN INCHES  
 CERTIFIED DRAWING AVAILABLE UPON REQUEST.  
 DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

## HURST PERFORMANCE SERIES BOILERS

### **WHY DEAERATE?**

The use of deaerators has long been used in power plants and water tube type boilers, primarily because they remove undissolved oxygen and raise the temperature of the feedwater. These advantages are important today for firetube boilers as well, due to higher capital investments. Operating costs can be reduced by recovering flash steam when returned by high temperature condensate. This feature also raises the feedwater temperature, thus requiring less boiler fuel to convert the feedwater to usable steam.

Boiler tubes, condensate lines, and process piping have a much longer useful life by eliminating the pitting action of untreated water. This advantage alone justifies the cost of an "OXY-MISER" deaerator.

### **HOW DOES IT WORK?**

Fresh make-up water is fed into the deaerator through the inlet water connection. This water passes through the steam-filled heating and venting section. The water temperature is raised and many of the undissolved gases are released. As the water passes through the assembly, it flows to a scrubber section where final deaeration is accomplished by scrubbing the water with oxygen free steam. This steam is induced through a stainless steel spray valve assembly which causes the high velocity steam to break the water down to a fine mist through a violent scrubbing action. The deaerated water spills over to the tanks storage compartment for use by the boiler, and the gases are vented to the atmosphere.

The *Hurst "Oxy-Miser"* deaerating boiler feedwater system eliminates the need of expensive oxygen scavenger chemicals and also offers the following advantages:

- Removes carbon dioxide as well as oxygen.
- Raises the boiler feedwater temperature, eliminating thermal shock in boilers.
- Improves overall boiler room efficiency.
- Feedwater pumps are sized for each individual application – assuring total compatibility and optimum operation.
- Vessels are ASME Code constructed for 50 psig.
- Compact design means smaller boiler room requirements.

### **STANDARD EQUIPMENT**

- Welded steel tank, designed for 50 psig as per the requirements of ASME Code deaerating section with spray valve.
- Structural steel stand with square tubing and steel pump platform.
- Feedwater pump and motor sets, sized for each application.
- Water inlet valve assembly for condensate return and fresh water.
- Overflow trap, tank thermometer, pressure gauge.
- Steam pressure reducing valve assembly with temperature controller.
- Safety relief valve(s), vent valves, tank drain valve.
- Water gauge glass set with cocks, drain valve, and protection rods.
- Pump suction piping with strainer and shut-off valve.

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