



# HURST

BOILER & WELDING CO., INC.

AVAILABLE WITH LOW NOX

## HURST SERIES 45

3-PASS FIREBOX DESIGN  
All Steel Wetback Construction

**LOW PRESSURE BOILER**  
Capacities from 8.5 to 813 BHP.  
285 to 27215 MBTU/HR.



SKID MOUNTED  
MODULAR PACKAGED

**STEAM**  
Pressure 15 max PSI.

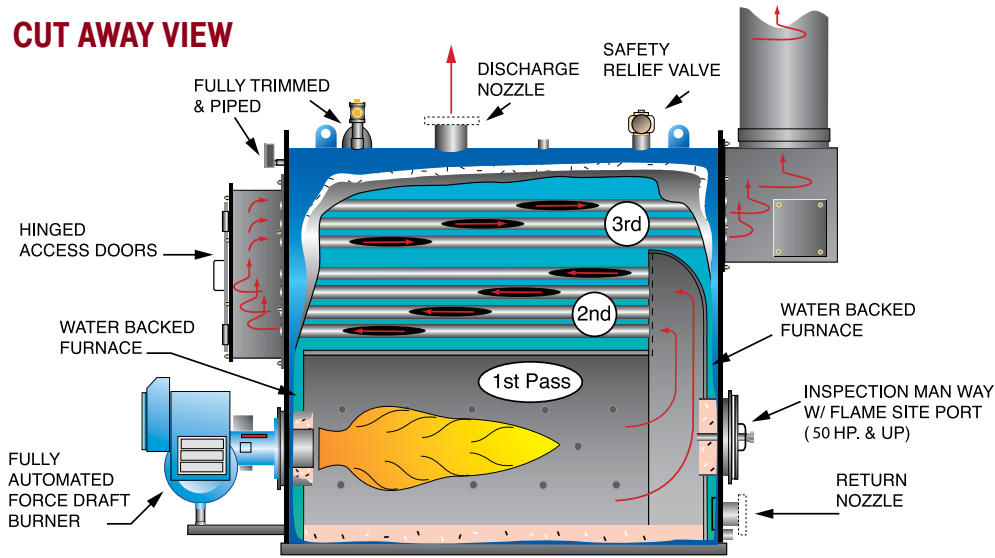
**HOT WATER**  
Section IV  
30, 60, 100 PSI.

*"Large Furnace Volume for Ultimate  
Combustion Efficiency."*

HURST PERFORMANCE SERIES BOILERS

# SERIES 45

## CUT AWAY VIEW



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

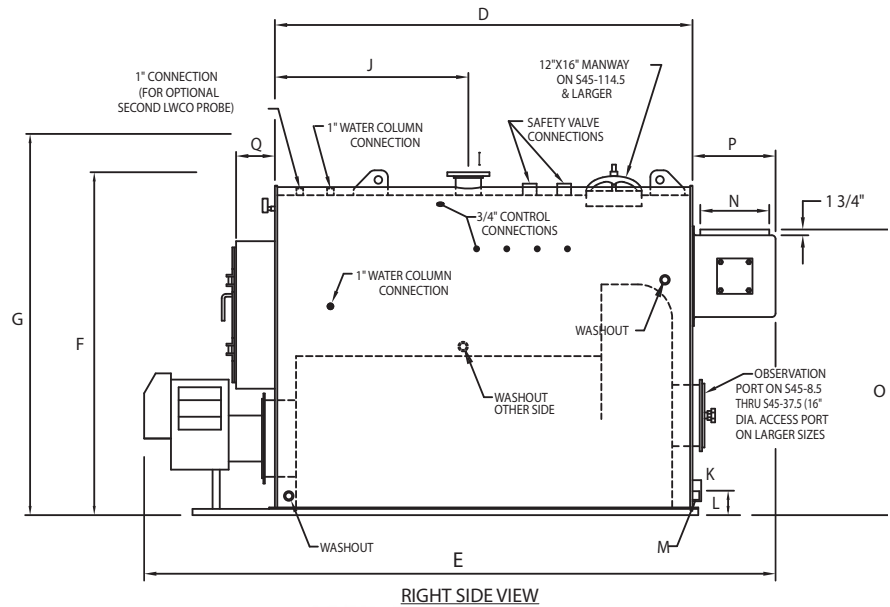
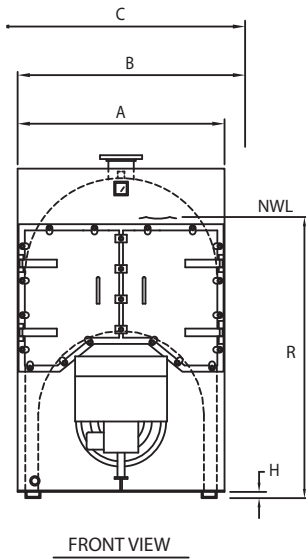


Designed, constructed and stamped in accordance with the requirements of the ASME Boiler Codes.

SPECIFICATIONS			SERIES 45 MODEL NO.															
BOILER HORSE POWER			S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45
FROM & @212° F			8.5	13.4	16.4	20	25	30	37.5	50	56	62.5	75	87.5	100	114.5	126.3	
STEAM OUTPUT	LBS/HR		293	462	566	690	863	1035	1294	1725	1932	2156	2588	3019	3450	3950	4357	
GROSS OUTPUT	MBH		285	449	549	670	837	1004	1255	1674	1875	2092	2511	2929	3348	3833	4228	
FIRING RATE, GAS	1,000 BTU	CFH	357	563	689	840	1050	1260	1575	2100	2352	2625	3150	3675	4200	4809	5304	
FIRING RATE, #2 OIL	140,000 BTU	GPH	2.6	4	5	6	7.5	9	11.3	15	17	19	22.5	26	30	34	38	
FIRING RATE, HEAVY OIL	150,000 BTU	GPH	NA	NA	NA	NA	NA	NA	NA	14	16	17.5	21	25	28	32	35	
TOTAL HEATING SURFACE	FIRESIDE	SQ.FT.	37	55	67	86	105	125	150	200	225	250	300	350	411	458	505	
RADIANT HEATING SURFACE	FIRESIDE	SQ.FT.	17.4	22.7	23.5	28.7	32.6	34.2	39.3	48	48.6	55	60	77	87	90.5	92	
FURNACE VOLUME		CU.FT.	6.8	7.3	9.2	12.4	14.8	18.7	22.5	27.4	30.7	33	40.6	52	67	68	73	
FURNACE HEAT RELEASE	MBH/CU.FT.		53	77	75	68	71	67	70	77	77	80	78	71	63	71	73	
A	WIDTH WITHOUT TRIM	IN	28	30	30	30	30	36	36	42	42	42	42	48	48	54	54	
B	WIDTH WITH TRIM	APPROX IN	35	37	37	37	37	43	43	49	49	49	49	55	55	61	61	
C	WIDTH WITH GAS TRAIN	APPROX IN	47	49	49	49	49	55	55	61	61	61	61	67	67	73	73	
D	LENGTH OVER TUBE SHTS.	IN	31	31	37	49	60	57	68	58	65	70	85	73	85	83	89	
E	OVERALL LENGTH with/ STD.BURNER	IN	78	78	84	96	107	106	121	113	120	125	145	135	147	148	159	
F	HEIGHT WITHOUT TRIM	IN	55.75	63.63	63.63	63.63	63.63	63	63	75.5	77.5	77.5	77.5	90	90	90	90	
G	HEIGHT WITH TRIM	APPROX IN	60	70	70	70	70	70	70	83	85	85	85	97	97	99	99	
H	BASE HEIGHT	IN	2	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	
I	SUPPLY SIZE	IN	3	4	4	4	4	4	4	4	6	6	6	6	6	6	6	
J	SUPPLY LOCATION	IN	13.5	17	18.5	24.5	24.5	25	30	28.5	30.5	30.5	36.5	31.5	36.5	39.5	42.5	
K	RETURN SIZE	IN	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	
L	RETURN LOCATION	IN	6	5	5	5	5	6.25	6.25	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	
M	DRAIN/BLWD. SIZE	IN	1	1	1	1	1	1	1.25	1.25	1.25	1.25	1.5	1.5	1.5	1.5	1.5	
N	EXHAUST STACK DIA.	O.DIA. IN	6	8	8	8	8	10	10	12	12	12	12	14	14	18	18	
O	STACK HEIGHT	IN	42.38	52.75	52.75	52.75	52.75	50.5	50.5	62	62	62	62	72.5	72.5	74.63	74.63	
P	REAR SMOKEBOX DEPTH	IN	10	12	12	12	12	14	14	16	16	16	16	18	18	22	22	
Q	FRONT SMOKEBOX DEPTH	IN	6.75	7.25	7.25	7.25	7.25	8.25	8.25	10.25	10.25	10.25	10.25	11	11	11	11	
R	NORMAL WATER LINE	STEAM IN	40	51	51	51	51	50.5	50.5	61	61	61	61	71	71	71	71	
	WATER VOLUME	STEAM GAL.	50	82	126	143	156	176	217	257	274	289	355	368	454	479	508	
	WATER VOLUME	FLOODED GAL.	72	102	150	175	195	218	267	312	336	356	436	471	574	608	647	
	SHIPPING WEIGHT APPROX.	STD.TRIM LBS.	1500	1700	1800	2000	2100	3100	3350	4000	4400	5300	5700	7000	8400	9100	9500	
	BOILER HORSEPOWER		8.5	13.4	16.4	20	25	30	37.5	50	56	62.5	75	87.5	100	114.5	126.3	

NOTE: CONNECTIONS UP TO 4" SIZE ARE NPT. THREAD, CONN'TNS. 6" & ABOVE ARE 150# ANSI FLANGE.

NOTE: 458 SQ.FT. AND LARGER HAS 12" X 16" MANWAY



	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45	S45
	152	187.8	207.5	225	250	290	331	415	500	625	769	813
	5244	6479	7159	7763	8625	10005	11420	14318	17250	21563	26531	28049
	5088	6287	6946	7532	8369	9708	11080	13892	16738	20922	25742	27215
	6384	7887	8715	9450	10500	12180	13902	17430	21000	26250	32298	34166
	45.6	56	62	67.5	75	87	99	124.5	150	187.5	231	244
	42.5	52.5	58	63	70	81	93	116	140	175	215	228
	625	750	830	900	1000	1160	1325	1660	2000	2500	3075	3250
	112	121	132	140	150	166	179	207	233	280	327	342
	92	116	132	142	155	188.7	210	261	329	407	502	535
	69	68	66	66.5	67.7	64.5	66	67	64	64.5	64	64
A	54	66.75	66.75	66.75	66.75	72	72	72	84	84	84	84
B	61	74	74	74	74	79	79	79	91	91	91	91
C	73	86	86	86	86	93	93	93	105	105	105	105
D	109	103	113	121	133	109	121	151	136.5	169.5	209.5	223.5
E	179	175	185	193	205	184	196	234	230	268	308	322
F	90	102	102	102	102	132.88	132.88	132.88	149.25	149.25	149.25	149.25
G	99	113	113	113	113	144.38	144.38	144.38	156	156	156	156
H	1.63	1.63	1.63	1.63	1.63	8	8	8	8	8	8	8
I	6	8	8	8	8	8	8	10	10	10	12	12
J	50.5	36.5	48.5	42.5	57.5	39.5	39.5	42.5	50.75	65.25	82.75	92.75
K	4	6	6	6	6	6	6	8	8	8	10	10
L	6.38	8	8	8	8	15.75	15.75	15.75	15.75	15.75	16.75	16.75
M	2	2	2	2	2	2	2	2	2	2	2	2
N	18	20	20	20	20	22	22	22	28	28	28	28
O	74.63	85.75	85.75	85.75	85.75	112.38	112.38	112.38	123.88	123.88	123.88	123.88
P	22	24	24	24	24	26	26	26	32	32	32	32
Q	11	13.25	13.25	13.25	13.25	15.25	15.25	15.25	18	18	18	18
R	71	80.25	80.25	80.25	80.25	107.5	107.5	107.5	122	122	122	122
	624	603	858	913	1005	1160	1195	1557	1801	2267	2765	2955
	794	856	1136	1211	1333	1485	1595	2056	2400	3013	3690	3942
	10200	12000	13500	14750	16000	19000	21000	24000	29000	38000	45000	49000
	152	187.8	207.5	225	250	290	331	415	500	625	769	813

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

**BOILER DESIGN:** Three-Pass "FireBox" design with stress relieving "Wetback" Firetube construction. Pressure designs for steam are ■ 8.5-813 HP } 15 psi. max. Built to Section-IV ASME Code. Hot Water pressures models are from ■ 8.5-415 HP } 100 psi. max. ■ 500-813 HP } 60 psi. max. Built to Section-IV ASME Code. Hot water temperature not to exceed 250° degrees F. at or near the outlet of boiler.

**STEAM MODEL TRIM:** Safety relief valve, operating pressure control, high limit pressure control with manual reset, steam pressure gauge with syphon, combination pump control and low water cut-off with gauge glass assembly and drain valve, auxiliary low water cut-off with manual reset.

**HOT WATER MODEL TRIM:** Safety relief valve, operating temperature control, high limit temperature control with manual reset, combination pressure & temperature gauge, low water cut-off control with manual reset.

**BURNER:** Matched UL listed "forced draft" power burners with factory pre-piped, wired and tested fuel configurations for natural gas, propane (LP) gas, No. 2 (diesel) oil, or combination of both gas/oil.

## HURST PERFORMANCE SERIES BOILERS

### SERIES 45

- Efficient 3-Pass Design
- Flexibility – Gas, Oil, Heavy Oil, and Combination Gas/Oil
- ASME Code Constructed & Stamped for 15 PSI Steam / 30-100 PSI Water
- Registered with the National Board of Boiler Inspectors
- Competitively Priced, Easily Maintained, Designed for Efficiency
- Large Furnace Volume for Ultimate Combustion Efficiency
- Unified Refractory Base Floor
- Steel Skids and Lifting Eyes
- Low Heat Release
- Factory Insulated – 2” Mineral Wool
- Factory Jacketed & Painted
- Easy Access to Fireside Surfaces
- Ample Waterside Clean-Out Openings
- Fully Automatic Operation
- U.L. Listed, Forced Draft Burners
- Wet Back Construction
- U.L. Listed Controls & Trim
- Factory Test Fired
- Flame Observation Ports Front & Rear



All units are factory packaged with operating controls, relief valves, burner and fuel train. Installation is made simple in that only service connections are needed to place in operation. Flexible burner systems are available for firing natural gas, LP gas, #2 oil, heavy oil, or combinations. High density 2” mineral wool insulation assures lower radiant heat loss. In addition to meeting the requirements of U.L., burner systems are optionally available to meet the requirements of FM, IRI, MILITARY and others.

#### Standard Steam Trim

- Operating & high limit pressure control
- Modulating pressure control (when appl.)
- Water column with gauge glass, combination low water cut-off & pump control
- Probe Aux, L.W.C.O. w/ Manual Reset  
Steam pressure gauge, syphon & test cock
- Water column drain valve
- Safety relief valve(s) per ASME Code

#### Standard Water Trim

- Operating & high limit temperature control
- Modulating temperature control (when appl.)
- Probe type low water cut-off control w/  
Manual Reset
- Combination pressure & temperature gauge
- Hot water return baffle for shock resistance
- Safety relief valve(s) per ASME Code

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[hurstboiler.com](http://hurstboiler.com)

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