19HE SERIES BOILER
CARLIN OIL BURNERS
SETUP INFORMATION

Boiler Model Number	Burner Model Number	Burner Motor HP	I=B=R Burner Input GPH	Actual Fuel Delivery GPH (Max.)	Nozzle Size & Type			Nozzle Mfg.	Pump Pressure	Preliminary	
										Head Setting	Air Setting
19HE-S/W- 3	201 CRD-PA	1/4	2.6	2.45	2.00		70 B	Delavan	150	7/16	25%
19HE-S/W- 4	301 CRD-PA	1/4	3.6	3.37	2.75		80 SS	Hago	150	5/16	50%
19HE-S/W- 5			5.0	4.90	4.00		60 PLP	Monarch	150	13/16	100%
19HE-S/W- 6			6.5	6.50	3.75		60 P	Hago	100/300	1/16	5/16*
19HE-S/W- 7	702 CRD	1/2	7.9	7.80	4.50		60 P	Hago	100/300	3/16	1/2*
19HE-S/W- 8			9.3	9.5	5.00		60 P	Hago	100/300	3/8	7/16*
19HE-S/W- 9			10.8	10.39	6.00		60 P	Hago	100/300	1	5/8*
					Low Fire	High Fire					
19HE-S/W-10			12.2	12.2	5.50	4.00	45 H	Hago	150	5/8	1/4*
19HE-S/W-11	801 CRD	3/4	13.6	13.42	5.50	5.50	45 H	Hago	150	5/8	3/8*
19HE-S/W-12			15.0	15.25	6.00	6.00	45 H	Hago	150	7/8	7/16*

*Preliminary Low Fire Air Setting
Above settings for steam or hot water boilers.
3-6 section boilers have target wall.
All burner settings are preliminary.
Final Burner adjustment must be done with combustion test instruments.
S/W insert “S” for Steam / “W” for Water.
Nozzle: 201 CRD Delevan 70° B, 301 CRD (4 section) Hago 80° SS 301 CRD (5 section) Monarch 60° PLP,
702 CRD Hago 60° P, 702 CRD Hago 60° P, 801 CRD Hago 45° H
Motor Current: All Burners = 1 Phase, 115/208-230V, 60 Hz.
Option for: 3 Phase, 208/230-460V, 60 Hz.
Control Circuit Current: 1 Phase, 115V, 60 Hz.

THESE INSTRUCTIONS TO BE LEFT WITH THE BOILER FOR REFERENCE PURPOSES.

Smith
CAST IRON BOILERS
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MADE IN THE USA

19HE SERIES BOILER

BURNERS FIRESIDES MUST BE CLEANED AT LEAST ANNUALLY

The following safety checks must be made at initial start-up and on an annual basis thereafter:

High Limit Operation (MR)	_____	Set at	_____ °F
Operating Limit Operation	_____	Set at	_____ °F
Low Water Cutoff	_____		
Backup Low Water Cutoff	_____		
Service Switches	_____		
All additional limits	_____		
Safety Valve Capacity*	_____ MBH (LBS/HR)		
Burner Motor Amps	_____		
Flame Failure	_____		
CO_2	_____ %		
Smoke (oil)	_____		
Carbon Monoxide (CO)	_____ ppm	Boiler Room Draft	
Draft in Smokehood	_____ in. wc	negative	_____
Draft Overfire**	_____ in. wc	positive	_____
Stack Temperature	_____ °F	balanced	_____
Efficiency	_____ %		
Combustion Makeup Air***	_____		

* Safety valve capacity must be at least equal to gross output of boiler.

** Draft should be adjusted to .05" to .1" wc positive pressure in smokehood. If vent system is under positive pressure, it must be gas-tight.

*** There must be at least 30 sq. in. of free area per gallon of oil burned. When louvers are used, double the figure listed above.

Proper operating and safety instructions must be given to boiler operator.