

# 19HE SERIES BOILER

## INSTALLATION AND OPERATING INSTRUCTIONS

### POWERFLAME BURNERS

OIL: 140,000 BTU/GAL.

NAT. GAS: 1020 BTU/CU. FT.

Boiler Model Number	Burner Model Number			I = B = R Burner Capacity		Nozzle Size GPH* (at 100 PSI)	Nozzle Pressure PSI*
	Oil	Gas	Gas/Oil	Oil GPH	Gas MBH		
19HE-S/W- 3	—	JR15A-10	—	—	375	—	—
19HE-S/W- 4	CR1-OA	JR15A-10	CR1-GO-10	3.6	520	2.25	260
19HE-S/W- 5	CR1-OA	JR30A-10	CR1-GO-10	5.0	725	3.0	280
19HE-S/W- 6	CR1-OA	JR30A-10	CR1-GO-12	6.5	931	4.0	265
19HE-S/W- 7	CR2-OA	JR30A-12	CR2-GO-15	7.9	1137	4.5	300
19HE-S/W- 8	CR2-OA	JR50A-15	CR2-GO-15	9.3	1342	5.5	285
19HE-S/W- 9	CR2-OA	JR50A-15	CR2-GO-15	10.8	1548	6.5	275
19HE-S/W-10	CR2-OA	JR50A-15	CR2-GO-15	12.2	1754	7.0	300
19HE-S/W-11	CR2-OA	CR2-G-20A	CR2-GO-20A	13.6	1989	8.0	290
19HE-S/W-12	CR2-OB	CR2-G-20B	CR2-GO-20B	15.0	2165	9.0	280

Nozzles: \*19HE-4 and 19HE-5 use Delevan type B nozzles, all others use Delevan type A nozzles.

Maximum gas pressure at inlet to **main manual shutoff** 14 ins. w.c.

Do not operate oil or gas/oil burners without oil supply to the fuel unit.

#### FOR YOUR SAFETY

**Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

**If you smell gas:**

- 1. Open windows.**
- 2. Don't touch electrical switches.**
- 3. Extinguish any open flame.**
- 4. Immediately call your gas supplier.**

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

**Smith**  
CAST IRON BOILERS

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## 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 <sub>2</sub>	_____ %	
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 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 10 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.**