



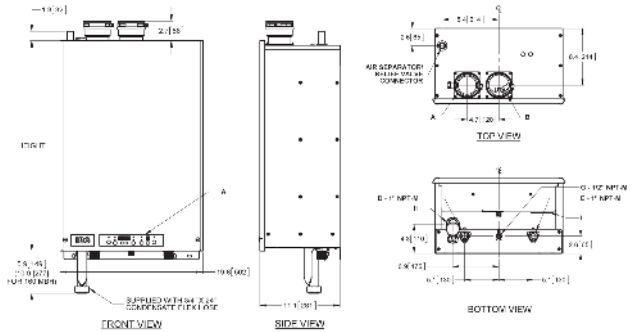
**Better Boilers**

# Engineering Submittal HC Series

13,500 to 51,000 BTU/HR    23,000 to 84,000 BTU/H    29,000 to 106,000 BTU/HR  
20,000 to 125,000 BTU/HR    33,000 to 160,000 BTU/HR

## Condensing Boiler

JOB NAME: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 \_\_\_\_\_  
 ENGINEER: \_\_\_\_\_  
 WHOLESALER: \_\_\_\_\_  
 CONTRACTOR: \_\_\_\_\_  
 \_\_\_\_\_  
 FUEL:    Natural Gas        Propane      
 BTUH/INPUT: \_\_\_\_\_  
 BTUH/OUTPUT: \_\_\_\_\_

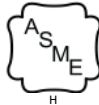


DESCRIPTION	DC SERIES
<b>A</b> Exhaust Outlet	3" Schedule 40
<b>B</b> Combustion Air	3" Schedule 40
<b>E</b> Heating Water Inlet (Return)	1" Male NPT
<b>F</b> Heating Water Outlet (Supply)	1" Male NPT
<b>G</b> Gas Inlet	1/2" Male NPT
<b>H</b> Condensate Outlet	3/4" Hose
<b>I</b> Knock-Outs (3)	1/2"

Connections

SPECIFICATIONS	HC 13-50	HC 23-84	HC 29-106	HC 20-125	HC 33-160
CSA Input (Natural Gas or Propane *) – MBH	13.5 – 51	23 – 84	29.0 – 106	20 – 125	33 – 160
CSA Input (Natural Gas or Propane *) – KW	3.95 – 14.94	6.7 – 24.9	8.4 – 31.0	5.6 – 36.6	9.7 – 46.9
CSA Output – MBH	12.4 – 45.4	21.2 – 74.8	26.7 – 94.3	18.6 – 110.8	30.4 – 140.0
CSA Output - KW	3.64 – 13.3	6.2 – 21.9	7.7 – 27.6	5.4 – 32.5	8.9 – 41.0
A.F.U.E	95%	94%	94%	95%	94%
Min Gas Pressure (Nat. Gas or Propane) – inch w.c.	5	5	5	5	5
Max Gas Pressure (Nat. Gas or Propane) – inch w.c.	14	14	14	14	14
Power (120Vac/60Hz) - Watts @ full fire with internal pump	126	126	128	130	164
Weight (empty) – lbs/Kg	85 / 39	85 / 39	85 / 39	85 / 39	85 / 39
Pressure Vessel water content – USG/Liters	0.37/1.4	0.37/1.4	0.37/1.4	0.5/1.9	0.5/1.9
Max boiler flow rate - USgpm	9	9	10	11	11
Min boiler flow rate - USgpm	2	2	3	3	3
Max Operating Pressure – Space Heating Coil - psig	43.5	43.5	43.5	43.5	43.5
Approved installation altitude - ASL	12,000 ft	12,000 ft	12,000 ft	12,000 ft	12,000 ft
Ambient Temperature – Low (°F/°C)	32/0	32/0	32/0	32/0	32/0
Ambient Temperature – High (°F/°C)	122/50	122/50	122/50	122/50	122/50
Max relative humidity (non-condensing)	90%	90%	90%	90%	90%
Min water Temperature - Space Heating (°F/°C)	50/20	50/20	50/20	50/20	50/20
Max water Temperature – Space Heating (°F/°C)	194/90	194/90	194/90	194/90	194/90
Max equivalent vent length 2" (each side)	35'	35'	35'	35'	35'
Max equivalent vent length 3" (each side)	120'	120'	120'	120'	120'

Boilers are shipped with 30 psi pressure relief valve.



SURFACE	DISTANCE FROM COMBUSTIBLE SURFACES	RECOMMENDED DISTANCE FOR INSTALLATION AND SERVICE
Front	2"	24"
Rear	0"	0"
Left Side	1.5"	6" (labels may be difficult to read with reduced clearance)
Right Side	4"	6" (labels may be difficult to read with reduced clearance)
Top	2"	24"
Bottom	8"	24"

Clearance from boiler cabinet

EXHAUST PIPE SIZE	MAXIMUM EQUIVALENT LENGTH
Sched.40; Rigid PPs	(each side)
2"	35'
3"	120'
2"/3" 90° Long Sweep Vent Elbow	Allow 5' equivalent feet
2"/3" 90° Short Sweep Vent Elbow	Allow 8' equivalent feet
2"/3" 45° Vent Elbow	Allow 3' equivalent feet
PPS	
PPs 87-90° Elbow	Allow 8' equivalent feet
Flexible PPs	
3" Flexible	35 actual feet

Maximum exhaust venting length

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