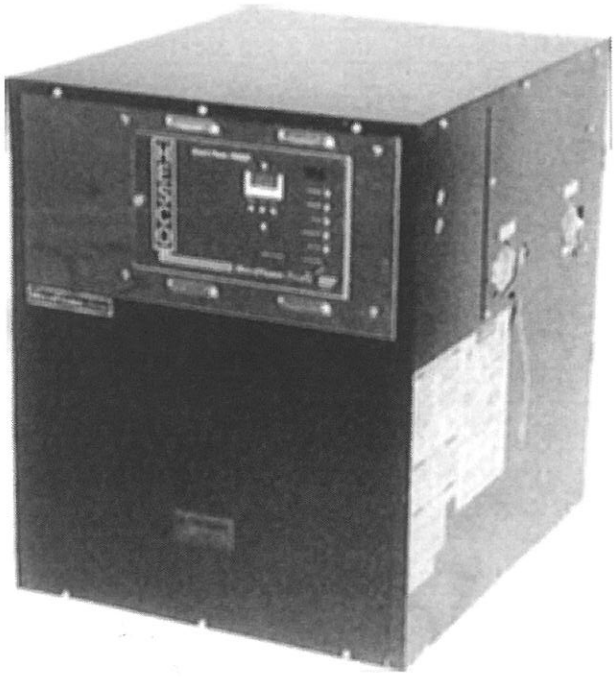
HESco™ INDUSTRIES, INCORPORATED

HEAT ENERGY SYSTEMS



MFW=DOMESTIC WATER BOILER
MFH=HYDRONIC HEATING

OPTIONAL EQUIPMENT

- 88% Efficiency - non-condensing
- 95% Efficiency-condensing
- Stainless steel economizer-316L
- Category III – safety vent required
- Two stage firing, model 60 – 600
- Two stage, Three stage, or Four stage models 800 – 4000
- Low gas pressure switch
- High gas pressure switch
- Low water cut off
- CSD-1 (Hydronic heating)
- Industrial Risk Insurors –IRI
- Cupro-Nickel heat exchanger
- Constructed for outdoor installation
- Optional digital temperature control
- Fresh air intake connection
- Side wall vent termination hood
- Air inlet damper
- Rack kit – Allows stacking boilers
- PKG – Packaged on skid with storage tank
- HI-2000-S gas/carbon monoxide alarm

STANDARD EQUIPMENT

- 85% Efficient – non-condensing
- Low NOx
- 7/8" copper extruded finned tube heat exchanger
- Cast bronze headers
- Ceramic burner
- Diagnostic light package
- Flame observation port
- Stainless steel trimmed jacket
- Sealed combustion chamber
- Ceramic fiber refractory
- Manual "A" shut-off valve
- Main gas valve
- Pilot "B" valve
- Gas pressure regulator
- 110/24 volt transformer
- ASME pressure relief valve
- AGA design certified
- ASME section IV – 160 PSI
- On/off firing
- Flow switch
- Operating temperature control
- Manual reset high limit
- Electronic ignition with flame supervision
- Inlet thermometer
- Outlet thermometer
- Meets ASHRAE 90 lob-1992
- Factory mutual –FM

VENTS UP TO 50 FEET HORIZONTALLY.
UP TO 50 FEET OF AIR INTAKE DUCT.

HEScо Industries, Inc., 513-D Ligon Drive, Nashville, TN 37204
Phone: 615-242-7600 **Fax: 615-255-4405**

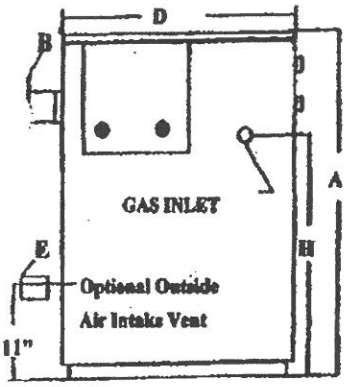
85% EFFICIENCY DIMENSIONS IN INCHES												95% EFFICIENCY DIMENSIONS IN INCHES			
MF MODEL	A	STD. B	SIDE WALL B	C	D	OPTIONAL AIR INTAKE	F	H	W	WATER CONN	GAS CONN	B	D	G	I
60	31 3/4	3	3	21 1/4	29 3/4	3	25	22 1/2	18 3/4	1 1/2 NPT	1/2	3	36 3/4	14 1/4	19 5/8
100	31 3/4	4	3	21 1/4	29 3/4	3	25	22 1/2	18 3/4	1 1/2 NPT	1/2	3	36 3/4	14 1/4	19 5/8
150	31 3/4	4	3	21 1/4	29 3/4	3	25	22 1/2	18 3/4	1 1/2 NPT	1/2	3	36 3/4	14 1/4	19 5/8
200	31 3/4	5	4	21 1/4	29 3/4	4	25	22 1/2	25	1 1/2 NPT	3/4	4	36 3/4	14 1/4	19 5/8
250	31 3/4	5	4	21 1/4	29 3/4	4	25	22 1/2	25	1 1/2 NPT	3/4	4	36 3/4	14 1/4	19 5/8
300	31 3/4	6	5	21 1/4	29 3/4	5	25	22 1/2	31 1/2	1 1/2 NPT	3/4	5	36 3/4	14 1/4	19 5/8
400	33 1/2	6	5	26	29 3/4	5	27	10	31 1/2	2 NPT	1	5	36 3/4	14 1/4	19 5/8
500	33 1/2	7	6	26	29 3/4	6	27	10	31 1/2	2 NPT	1	6	36 3/4	14 1/4	19 5/8
600	33 1/2	7	6	26	29 3/4	6	27	10	31 1/2	2 NPT	1	6	36 3/4	14 1/4	19 5/8
800	43	10	10	27 1/2	30 1/2	10	32 1/4	38	45 3/4	2 1/2	1	8	44 1/2	17 5/8	22 1/8
1000	43	10	10	27 1/2	30 1/2	10	32 1/4	38	52 3/4	2 1/2	1 1/4	8	44 1/2	17 5/8	22 1/8
1200	43	12	12	27 1/2	30 1/2	12	32 1/4	38	62	2 1/2	1 1/4	10	44 1/2	17 5/8	22 1/8
1400	43	12	12	27 1/2	30 1/2	12	32 1/4	38	71 1/4	2 1/2	1 1/4	10	46 1/2	17 5/8	22 1/8
1600	43	14	14	27 1/2	30 1/2	14	32 1/4	38	80 3/4	2 1/2	1 1/2	12	46 1/2	17 5/8	22 1/8
1800	43	14	14	27 1/2	30 1/2	14	32 1/4	38	89 3/4	2 1/2	1 1/2	12	46 1/2	17 5/8	22 1/8
2000	43	14	14	27 1/2	30 1/2	14	32 1/4	38	99	2 1/2	1 1/2	12	46 1/2	17 5/8	22 1/8
2000	47 1/2	14	12	30 3/4	50 3/4	12	37 1/4	37 1/4	54 5/8	3	1 1/2	12	60	26 7/8	31 3/4
2500	47 1/2	16	14	30 3/4	50 3/4	14	37 1/4	37 1/4	78 7/8	3	2	14	72	26 7/8	31 3/4
3000	47 1/2	16	14	30 3/4	50 3/4	14	37 1/4	37 1/4	78 7/8	3	2	14	72	26 7/8	31 3/4
3500	47 1/2	18	16	30 3/4	50 3/4	16	37 1/4	37 1/4	103	3	2 1/2	16	72	16 5/8	19 3/4
4000	47 1/2	18	16	30 3/4	50 3/4	16	37 1/4	37 1/4	103	3	2 1/2	16	72	16 5/8	19 3/4

* Recommend 4" pipe on 3500 and 4000

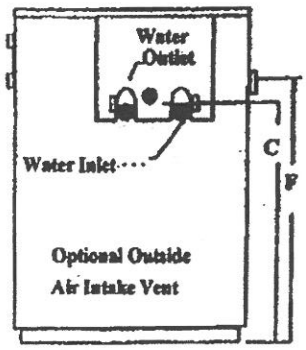
HEAT EXCHANGER HEAD LOSS & TEMPERATURE RISE				
	TEMPERATURE RISE ACROSS HEAT EXCHANGER			
	20F		30F	
MODEL	USGPM	P-FT	USGPM	P-FT
MF60	5.1	0.01	3.4	0.005
MF100	8.5	0.02	5.7	0.01
MF150	12.8	0.04	8.5	0.03
MF200	17.0	0.08	11.3	0.05
MF250	21.3	0.16	14.2	0.10
MF300	25.5	0.49	17.0	0.19
MF400	34.0	0.55	22.7	0.26
MF500	42.5	0.76	28.3	0.39
MF600	51.0	1.15	34.0	0.55

HEAT EXCHANGER HEAD LOSS & TEMPERATURE RISE				
TEMPERATURE RISE ACROSS HEAT EXCHANGER				
	30F		35F	
MODEL	USGPM	P-FT	USGPM	P-FT
MF800	44.4	1.10	38.0	0.8
MF1000	55.5	2.00	47.6	1.5
MF1200	66.7	3.10	57.1	2.4
MF1400	77.8	4.30	66.7	3.4
MF1600	88.9	5.40	76.2	4.0
MF1800	100.0	6.90	85.7	5.1
MF2000	112.0	7.8	95.2	6.2
MFNW2000	113	2.4	97	1.8
MFNW2500	141	4.30	121	3.3
MFNW3000	170	6.20	146	4.5
MFNW3500	198	10.20	170	7.7
MFNW4000	200	10.20	194	9.8

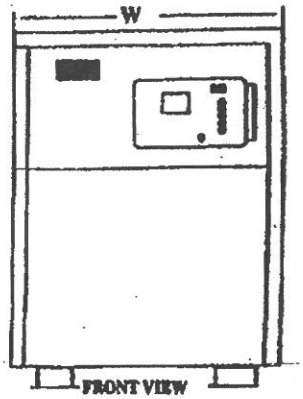
*Maximum flow recommended. Temperature rise may be higher than shown. Contact factory for recommendations.



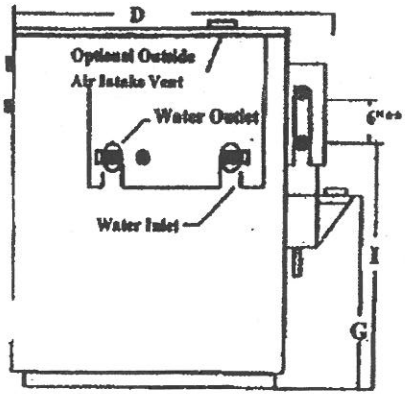
SIDE VIEW (left)



SIDE VIEW (right)



FRONT VIEW



SIDE VIEW (right) - Condensing option

**20" on models 3500 and 4000

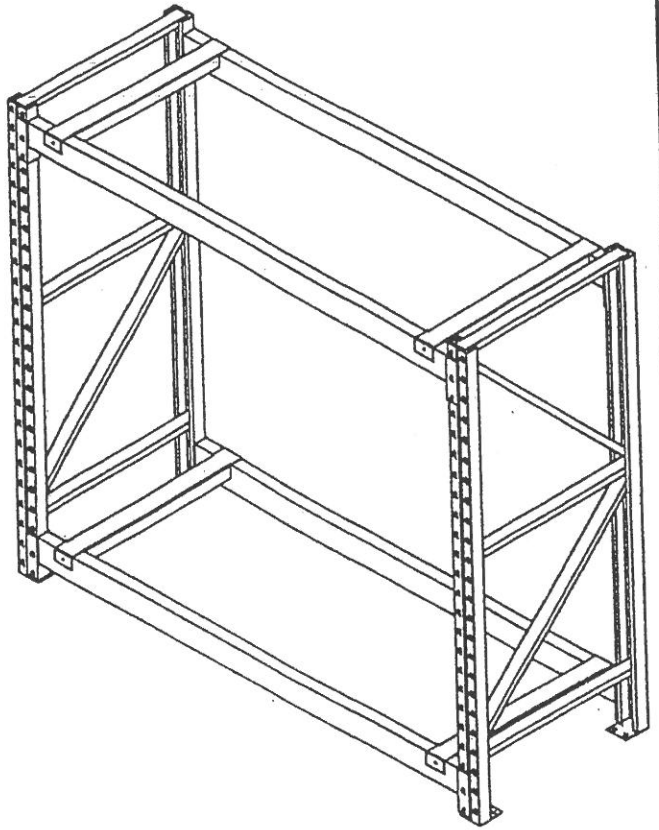
RECOVERY RATE							
	BTUH INPUT X 1000	85% EFFICIENT		95% EFFICIENT		SHIPPING WEIGHT	
MODEL		80F	100F	80F	100F	85%	95%
MF60	60	61	76	85	68	190	230
MF100	100	127	102	142	114	195	235
MF150	150	191	153	213	171	200	240
MF200	200	255	204	285	228	210	250
MF250	250	318	255	356	285	225	285
MF300	300	382	306	427	342	240	290
MF400	400	510	408	570	456	290	310
MF500	500	637	510	712	570	305	345
MF600	600	765	612	855	684	360	400

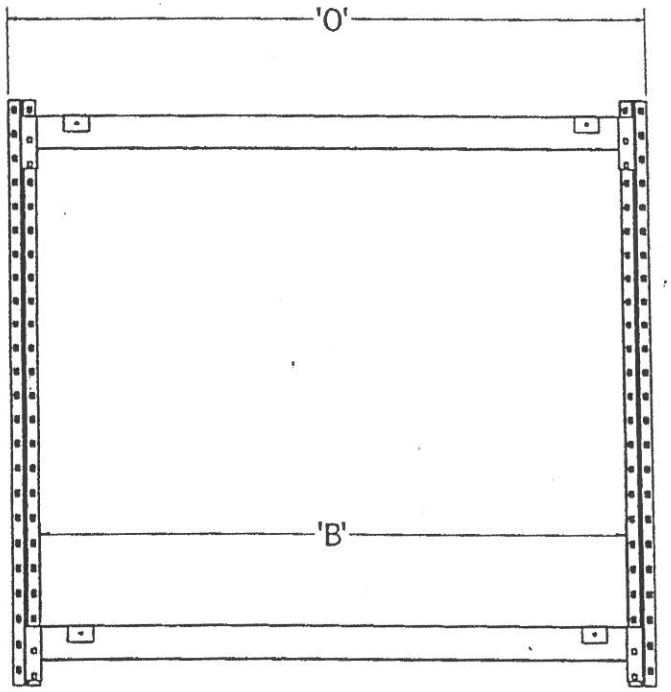
RECOVERY RATE							
	BTUH INPUT X 1000	85% EFFICIENT		95% EFFICIENT		SHIPPING WEIGHT	
MODEL		80F	100F	80F	100F	85%	95%
MF800	800	1020	816	1140	912	500	560
MF1000	1000	1275	1020	1425	1140	610	690
MF1200	1200	1530	1224	1710	1368	732	826
MF1400	1400	1785	1428	1995	1598	854	966
MF1600	1600	2040	1632	2280	1824	976	1104
MF1800	1800	2295	1836	2566	2052	1098	1247
MF2000	2000	2551	2040	2851	2280	1220	1380

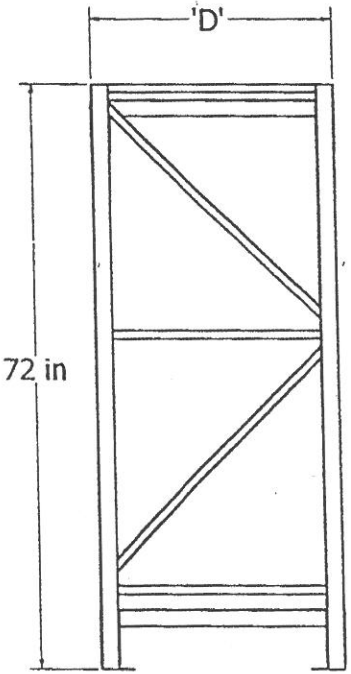
RECOVERY RATE							
	BTUH INPUT X 1000	85% EFFICIENT		95% EFFICIENT		SHIPPING WEIGHT	
MODEL		80F RISE/ GPH	100F RISE/ GPH	80F RISE/ GPH	100F RISE/ GPH	85%	95%
MFNW2000	2000	2551	2040	2851	2280	1420	1580
MFNW2500	2500	3183	2546	3563	2851	1830	1990
MFNW3000	3000	3819	3055	4276	3421	2250	2400
MFNW3500	3500	4456	3585	7989	3991	2640	2810
MFNW4000	4000	6093	4074	5702	4561	3030	3220

MicoF. .e I & II	Beam Length 'B'	Overall Width 'O'	Overall Depth 'D'
60-800	50	57	30
1000	57	64	30
1200	66	73	30
1400	76	83	30
1600	85	92	30
1800	94	101	30
2000	103	110	30

MicoFlame Grande	Beam Length 'B'	Overall Width 'O'	Overall Depth 'D'
2000	57	64	52
2500	85	92	52
3000	85	92	52
3500	107	114	52
4000	107	114	52







DRAWN DC	1/21/2005	HESCO INDUSTRIES, INC.
CHECKED		TITLE: *MicoFlame Series I, II & Grande Stacking Rack Assembly*
QA		
MFG		SIZE C; DWG NO 16-0020; REV 01
		SCALE; SHEET 1 OF 1