Bulletin: MFD-2013-001

Date: 09/13/2013

Supercedes: TD-T113b 3/14/2012

TECHNICAL DATA

HARSCO INDUSTRIAL Patterson-Kelley

MODU-FIRE® Forced Draft COMBUSTION DATA

	Units	750	1000	1500	2000	2500	3000
Input	Btu/hr	750,000	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000
Output	Btu/hr	637,500	850,000	1,275,000	1,700,000	2,200,000	2,640,000
Output	BHP	19.0	25.4	38.0	50.8	65.7	78.9
Efficiency	%	0.85	0.85	0.85	0.85	0.88	0.88

Natural Gas	Units	750	1000	1500	2000	2500	3000
Fuel Rate	cfh	728	971	1456	1942	2427	2913
Fuel Rate	pph	33	44	65	87	109	131
Pounds of Air	pph	748	997	1,496	1,994	2,493	2,991
Air Requirement	SCFM	166	222	332	443	554	665
Flue Gas Flow	ACFM	267	356	535	713	863	1035
Flue Gas Flow	fps	22.7	30.2	25.5	34.0	26.4	31.6
Dry Flue Gas Flow	pph	701	935	1402	1869	2336	2804
Wet Flue Gas Flow	pph	781	1041	1561	2081	2602	3122
Duct	in	6	6	8	8	10	10
Emissions:							
CO_2	pph	80	107	160	214	267	321
CO	ppm	29	20	32	32	61	80
NOx	ppm	10	7.0	8.5	8.5	7.5	7.1

Propane	Units	750	1000	1500	2000	2500	3000
Fuel Rate	cfh	297	396	594	792	Not Available	
Fuel Rate	pph	35	46	69	92		
Pounds of Air	pph	709	945	1,418	1,890		
Air Requirement	SCFM	158	210	315	420		
Flue Gas Flow	ACFM	253	339	509	679		
Flue Gas Flow	fps	21.5	28.8	24.3	32.4		
Dry Flue Gas Flow	pph	678	904	1356	1808		
Wet Flue Gas Flow	pph	744	991	1487	1983		
Duct	in	6	6	8	8		
Emissions:							
CO_2	pph	104	138	207	276		

NOTES:

1) Abbreviations: MBH = 1000 BTU per Hour
BHP = Boiler Horsepower
SCFH = Standard Cubic Feet per Hour
SCFM = Standard Cubic Feet per Minute
ACFM = Actual Cubic Feet per Minute
FPS = Feet per Second
pph = Pounds per Hour
ppm = Parts per Million

2) Conditions: Ambient Temperature – 60°F
Relative Humidity – 70%
Flue gas Temperature (Net)–
230° F (N-700, - 1200)
260° F (N-1500, - 2000)
High Heating Value, BTU/SCF: 1030