

Natural Gas Rich Burn CHP Modules:



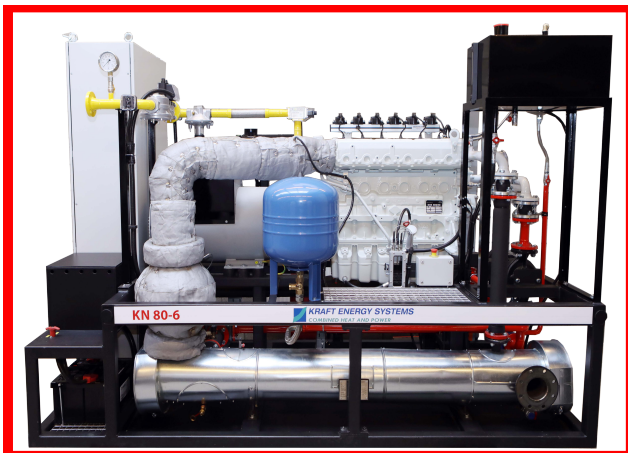
Kraft Energy Systems provides clean and efficient power for a wide range of applications. We utilize the highest quality components to package reliable solutions for long term operation.

Successful CHP projects require an experienced and responsive supplier who also provides expert field service after the sale. Kraft Energy Systems is that brand.



The Kraft Energy Systems Advantage:

- Over 50 Years of Power Generation Experience
- Pre & Post Sale - Engineering Support
- Long Term Service Agreements
- 24 x 7 Parts & Service
- Lower Energy Cost
- Environmentally Responsible



- Reliable, Fuel Efficient industrial Engine with Standard Catalytic Emissions Reduction
- Fully Automated & User Friendly Control System with Remote Access & Monitoring
- Compact Standardized Design
- Quiet Indoor and Outdoor Enclosure Design
- Hot Water Heat Recovery
- Pre-manufactured Modules Reduce Installation Cost
- Standardized Utility Inter-tie Controls, Relay Options Available
- Exceptional Load Acceptance Capability
- Rich Burn Models from 58 kWe - 285 kWe

CHP UNIT MODEL		KN 58	KN 80	KN 150	KN 285
MAN Engine Model	-	E 0834 E302	E 0836 E302	E 2676 E302	E 3262 E302
Generator Model	-	LSA 44.3 S4	LSA 44.3 M6	LSA 46.3 S3	LSA 47.2 VS2
Electric Output	kWe	58	80	150	285
Amps @ 600V @ 0.8 P.F.	Amps	70	96	180	343
Amps @ 480V @ 0.8 P.F.	Amps	87	120	226	429
Amps @ 208V @ 0.8 P.F.	Amps	201	278	520	989
Fuel Consumption (LHV)	BTU/hr	581,000	799,000	1,399,000	2,644,000
Engine Horsepower	BHP	83	114	215	402
No. of Cylinders / Arrangement	-	4 / IL	6 / IL	6 / IL	12 / V
Bore & Stroke	in	4.25 × 4.92	4.25 × 4.92	4.96 × 6.54	5.20 × 6.18
Displacement	cu in	279	419	758	1573
BMEP	psi	130.9	119.6	123.3	113.1
Compression Ratio	-	13:1	13:1	12:1	12:1
Electric Efficiency	%	34.2	34.3	36.6	36.8
Thermal Efficiency	%	52.2	52.4	50.9	52.5
Combined Efficiency	%	86.4	86.7	87.5	89.3
Thermal Output	BTU/hr	303,000	418,000	711,000	1,389,000
Process Water Flow @ 32 °F rise	GPM	19	26	45	88
Process Water Flow @ 20 °F rise	GPM	31	43	73	142
Process Water Temperature	°F	190 or 180	190 or 180	190 or 180	190 or 180
Sound Level @ 1m	dB(A)	75 +/- 3	75 +/- 3	75 +/- 3	75 +/- 3
Exhaust Flow	lbs/hr	487	679	1,125	2,219
Exhaust Temperature	°F	248	248	248	248
NOx emission*	g/BHP-hr	< 0.1	< 0.1	< 0.1	< 0.1
CO emission*	g/BHP-hr	< 0.6	< 0.6	< 0.6	< 0.6
Gas Pressure (Min)	in WC	10	10	10	10

* Correlation 5% O₂

Tech Data is based on Natural Gas with a calorific value of 970 Btu/ft³ and a methane No. >80.

Tech Data is based on standard conditions in accordance with DIN ISO 3046-1.

Atmospheric pressure: 14.5 psi or 328 ft above sea level, Air Temperature: 77 deg F, Relative Humidity: 30%

Tolerances: Fuel Consumption + 5%, Thermal Output +/- 8%

Sound Level Rating applies to Indoor Enclosed Module

Sound Level Rating applicable to Outdoor Enclosed Module is 65 dB(A) +/- 3 @ 10 m

Heat transfer data is based on 40% antifreeze.

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