

VALUE ESTIMATING TOOL GAS TURBINE IN PAPER AND CARDBOARD APPLICATIONS

MAIN REFERENCE ASSUMPTIONS:

Temperature: 15°C (59°F), Sea Level

Running Hours = 8,200 h/yr

Availability: 100%

No Selling Extra Power

Estimates Include Maintenance Costs

This tool provides a quick evaluation of potential annual operating savings. This is only an estimate and should be discussed with your Solar Sales Manager.



Visit the Solar Turbines CHP web page at www.solarturbines.com

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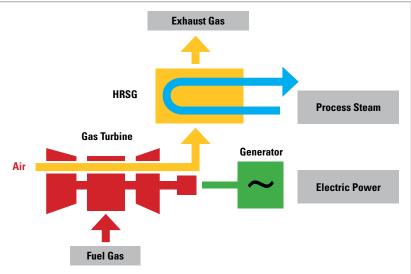
REQUIRED DATA

- 1. Total Paper Production [t/yr]
- 2. Total Steam Production [t/hr]
- 3. Total Electrical Load [kW]
- 4. Gas Cost [USD/MMBtu]
- 5. Electrical Cost [USD/kWh]

... and for DEEPER ANALYSIS

- 6. Steam Pressure and Temperature
- 7. Gas Pressure
- 8. Hot Water/Chilled Water Needs
- 9. Yearly Operating Hours
- 10. Yearly Operating Cost





STEP 1 – Select Your Gas Turbine

Use the chart below to locate your plant's yearly production or electrical consumption [MW] and steam needs [t/hr]. This will identify which gas turbine best meets your requirements.

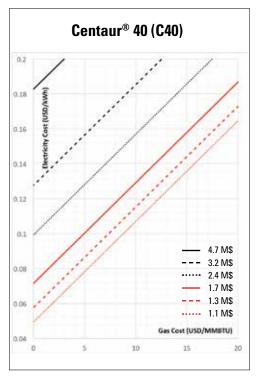
GRAPHIC PAPER [1000 x t/yr]			17-28	28-39	39-46	46-53	53-56	56-70	70-85	85-106	106-127	127-166	166-176	176-208	208-282	282-314	314-43
	CARDBOARD PACKAGING PAPER [1000 x t/yr]		22-35	35-48	48-57	57-66	66-70	70-88	88-105	105-132	132-159	159-207	207-220	220-260	260-353	353-393	393-54
		Steam Production [I/hr] Electrical Consumption [MW]	5-8	8-11	11 - 13	13 - 15	15 - 16	16 - 20	20 - 24	24 - 30	30 - 36	36 - 47	47 - 50	50 - 59	59 - 80	80 -89	89 - 12
35-47	53-71	3-4		C40	C40	C40	C40	C40	C40	C40	C40						
47-59	71-89	4-5	M50	C40	C50												
59-71	89-106	5-6	M50	C40	T60/C50	T60											
71-82	106-124	6-7	M50	C40	T60/C50	T60/T65	T65	T65	T65	T65	T65	T65					
82-94	124-142	7-8	M50	C40	T60/C50	T65	T65/T70	T70	T70	170	T70	T70	T70				
94-106	142-160	8-9	M50	C40	T60/C50	T65	T70	T70	T70	170	T70	T70	T70				
106-119	160-177	9 - 10	M50	C40	T60/C50	T65	T70		_								
119-130	177-195	10 - 11	M50	C40	T60/C50	T65	T70	T70	M100								
130-142	195-213	11 - 12	M50	C40	T60/C50	T65	T70	T70	M100								
142-154	213-231	12 - 13	M50	C40	T60/C50	T65	170	T70	M100								
154-165	231-248	13 - 14	M50	C40	T60/C50	T65.	T70	T70	M100								
165-177	248-266	14 - 15	M50	C40	T60/C50	T65	170	T70	M100	T130							
177-189	266-284	15 - 16	M50	C40	T60/C50	T65	T70	T70	M100	T130							
189-201	284-302	16 - 17	M50	C40	T60/C50	T6S	T70	T70	M100	T130	7130	T130	T130	T130	T130	T130	
201-213	302-320	17 - 18	M50	C40	T60/C50	T65	170	T70	M100	T130	T130	T130	1130	T130	T130	T130	
213-225	320-337	18 - 19	M50	C40	T60/C50	T65	T70	T70	M100	T130							
225-237	337-355	19 - 20	M50	C40	T60/C50	T65	T70	T70	M100	T130							
237-249	355-373	20 - 21	M50	C40	T60/C50	T65	T70	T70	M100	T130	T250						
249-260	373-391	21 - 22	M50	C40	T60/C50	T65	T70	T70	M100	T130	T250						
260-273	391-408	22 - 23	M50	C40	T60/C50	T65	170	T70	M100	T130	T250						

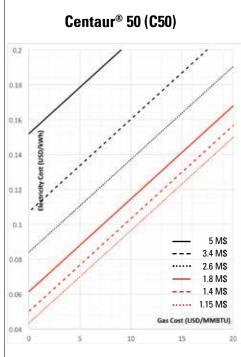
STEP 2 – Identify Your Potential Savings

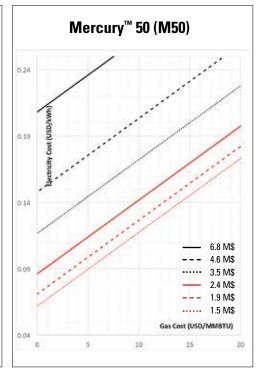
Locate the gas turbine from step 1 in the charts below. Identify the savings line according to your gas [USD/MMBtu] and power [USD/kWh] costs.

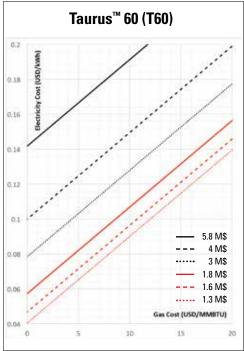
CALCULATION TIPS

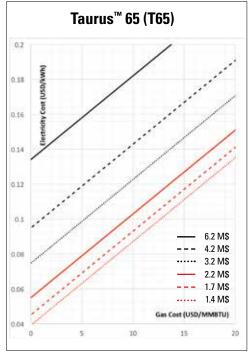


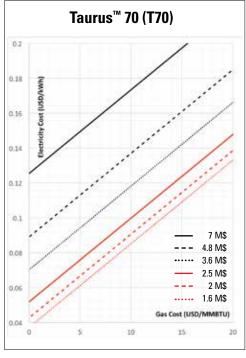




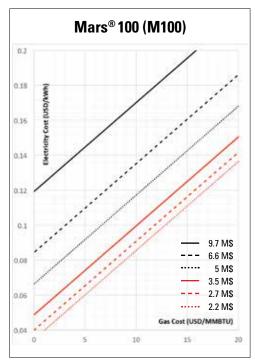


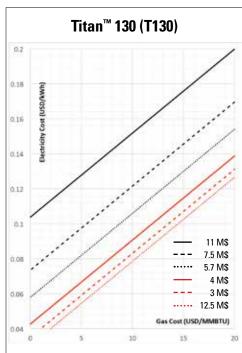


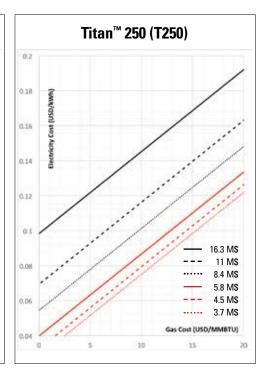




STEP 2 (continued) – Identify Your Potential Savings







Solar Turbines - Sales and Service Locations



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