



TF50F OILFIELD GAS TURBINE

The TF50F gas turbine is a compact, rugged power unit designed for stationary, portable, mobile, and offshore applications. The core is a well-proven design, having accrued over 15 million operating hours in harsh military and commercial service. The TF50F incorporates critical enhancements to meet the rigors of the oil & gas market, especially for hydraulic fracturing.

Proven Benefits

HIGH RELIABILITY

Rugged design with cold-end drive and military heritage with over 15 million hours in harsh environments for maximum reliability.

FUEL FLEXIBILITY

Dual fuel with either gas (NG, CNG, LPG, wellhead gas) or liquid and fuel switching at full load. Fuel flexibility eliminates single fuel dependency and reduces fuel costs.

ECO-FRIENDLY

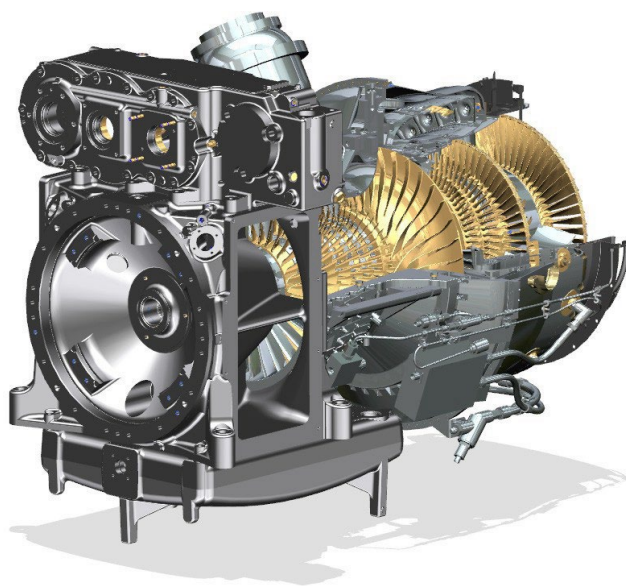
Lower emissions and noise compared to reciprocating engines.

LOW MAINTENANCE FREQUENCY

Up to 60,000 equivalent hours between major overhaul at the factory (depending on power level, fuel, and application).

COST EFFECTIVE

Reduced CAPEX and life cycle cost savings approx. 50% of comparable reciprocating engine cost and 35% of electric motors.



Applications

Stationary and Mobile for:

- Power Generation
- Mechanical Drive for Pumping/Frac
- Mechanical Drive for Compression



Features and Capabilities



FLEXIBLE
On-condition maintenance, fuel variation, mobile options



OPEX ADVANTAGES
5,000 SHP on a single trailer, reducing space, personnel, and logistic requirements



EASY TO PACKAGE
Integrated oil sump and accessories save on plumbing and wiring



EASY MAINTENANCE
Site module/engine replacement time in less than 8 hours, with no realignment required



COMPACT
Highest power-to-weight ratio in its class



COLD START
Superior cold start capability, no required warm-up time
(*)with optional cold-weather kit



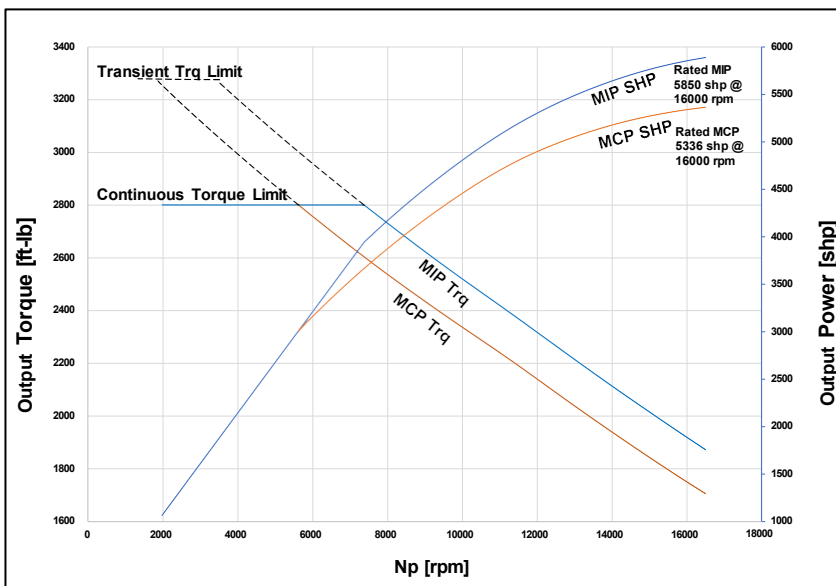
FAST START
Can start from zero to full load in less than one minute



DIRECT MOUNT
Direct mount eliminates alignment issues

Turbine Specifications

Power & Torque vs Np (rpm)



TF50F SL, 59°(15°), Uninstalled, Natural Gas

Performance		Gas Fuel	Liquid Fuel
Output power (MCP)	shp	5,336	5,100
	kW	3,979	3,803
Boosted power (MIP)	shp	5,850	5,600
	kW	4,362	4,119
Heat rate	Btu/kWh	11,253	11,334
	kJ/kWh	11,872	11,958
Thermal efficiency	%	30.30	30.1
Fuel flow	lb/hr	2,180	2,350
	kg/hr	989	1,065
Fuel pressure (min/max)	psig	180/250	
	KPa	1,241/1,723	
Exhaust flow	lb/sec	31.10	30.58
	kg/sec	14.10	13.85
Exhaust temperature	°F	1,122	1,114
	°C	605	601
Maximum torque	ft-lb		3,270
	N-m		4,431
Length	in		54.7
	mm		1,389
Width	in		34.7
	mm		881
Height	in		49.1
	mm		1,247
Weight	lb		1,475
	kg		670

Performance information at MCP

