ALSTOM GT13E2 GAS TURBINE

Technical Specifications & Performance Data

Heavy-duty 50 Hz gas turbine | ABB > Alstom > GE (now Alstom Energy, part of GE Vernova) lineage | 170+ units installed worldwide

1 PERFORMANCE DATA (ISO, natural gas)

Parameter	GT13E2 (baseline)	GT13E2 MXL / MXL2
Net power output	172 MW	183 / 190 MW
Net electrical efficiency	37.5 %	38.2 / 38.5 %
Heat rate (LHV)	9,610 kJ/kWh	9,420 / 9,350 kJ/kWh
Exhaust mass flow	529 kg/s	535 / 540 kg/s
Exhaust temperature	540 °C	545 / 548 °C
Pressure ratio	15.8 : 1	16.2 / 16.6 : 1
Turbine inlet temperature	~1,100 °C	~1,140 °C
Rotational speed	3,000 rpm (50 Hz)	·

2 COMBINED CYCLE CONFIGURATION (typical 1-on-1)

Parameter	Value
Combined cycle output	~260 MW
Combined cycle efficiency	~58 %
Steam turbine output	~88 MW
NOx (at 15 % O2)	< 25 ppm (natural gas)
CO (at 15 % O2)	< 10 ppm

3 MACHINE DIMENSIONS & WEIGHT

Parameter	Value
Overall length	~11 m
Overall width / height	~4.5 m / ~4.5 m
Turbine weight (complete)	~430 t
Rotor weight	~100 t
Compressor	21-stage (16-stage for MXL2 class)
Turbine	5-stage reaction turbine
Combustion	Annular chamber, 72 EV / 48 AEV burners

4 MAINTENANCE INTERVALS (EOH)

Maintenance event	Interval	Scope
Borescope inspection	4,000-6,000 h	Non-intrusive internal inspection via borescope ports
Combustion inspection (CI)	8,000-12,000 h	Burners, combustion liner, fuel nozzle cleaning
Hot gas path inspection (HGPI)	24,000 h	Blades, vanes, TBC, cooling passages, rotor check
Major inspection (MI / C-insp.)	48,000 h	Rotor removal, disc NDT, bearings, re-blading as needed

5 HOT GAS PATH MATERIALS & MANUFACTURING ROUTES

Component	Material grade	Manufacturing route
Turbine rotor blade	IN738LC / IN738 / EEQ111 / Mar-M247	Vacuum investment casting + HIP + heat treat + coating
Turbine vane / NGV	IN738LC / IN939 / Mar-M247 / EEQ111	Investment casting + HIP + TBC
Burner, liner, transition piece	IN625 / IN718 / Hastelloy C-276 / 1.4841	Sheet forming + welding + machining + heat treat
Compressor blade / stator vane	12Cr martensitic / 17-4PH / Ti-6Al-4V	Precision forging + 5-axis CNC + shot peening + FPI
Rotor disc, spacer, tie bolt	26NiCrMoV145 / 1CrMoV / IN718	Open-die forging + machining + UT/MT + balancing
Seals, casings, bolting	IN718 / X22CrMoV12-1 / 1.4980	Machining + heat treat + clearance verification

6 SUPPLY TERMS

Supply mode	MOQ	Lead time
New manufacture (OEM drawing or reverse-engineered)	1 pc	8-14 weeks
Repair & refurbishment (weld build-up, HIP, re-coat)	1 pc	4-8 weeks
Exchange pool / consignment stock	Contract	Ex-stock - 4 weeks
Outage emergency response	1 pc	By agreement

7 QUALITY & CERTIFICATION

- Material certification EN 10204 3.1 as standard; 3.2 with third-party (TÜV / SGS / BV) on request
- Quality system ISO 9001:2015; aerospace-grade AS9100D scheme available for critical rotating parts
- Full melt-to-shipment traceability: heat number, part number, serial number on every component
- NDT: UT, MT, PT, FPI per OEM acceptance criteria; dimensional CMM verification against OEM drawings
- Independent alternative manufacturer · not affiliated with or licensed by GE / Alstom / Ansaldo

REQUEST A QUOTATION

Send part number or drawing, quantity, certification level (EN 10204 3.1 / 3.2) and target delivery date.

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Surplus stock (9FA buckets, Frame 5 rotor, IGT line list): www.zurnpower.com/inventory/