



**JADE Power Trading**  
Quality Energy Equipment

PRODUCT  
BROCHURE  
REF.  
10932026

## COMBINED CYCLE CHP & TRIGENERATION PLANT SOLAR MARS 100 + SIEMENS SST 060

12.5 MWe | 11 kV | 50 Hz | Year 2007



**12.5 MWe**  
ELECTRICAL  
CAPACITY

**1.6 MWth**  
CHILLED WATER  
CAPACITY

**Approx. 16,000 h**  
REPLACEMENT GT  
HOURS

**Mid-2025**  
OEM OVERHAULS

OEM-OVERHAULED • DUAL-FUEL • POWER, STEAM & CHILLED WATER

# EQUIPMENT OVERVIEW

High-efficiency combined-cycle CHP and trigeneration capacity for electricity, steam and chilled-water production.

## COMBINED-CYCLE TRIGENERATION POWER PLANT

This combined-cycle CHP and trigeneration plant combines a Solar Turbines Mars 100 dual-fuel gas turbine, a Siemens SST 060 back-pressure steam turbine, a water-tube heat-recovery steam generator and an LS double-effect absorption cooling system. The plant was commissioned in 2007 and is designed for industrial cogeneration, district energy and process-cooling applications.

The Solar Mars 100 gas turbine provides approximately 10 MWe and the Siemens steam turbine adds approximately 2.5 MWe, giving a total electrical output of 12.5 MWe at 11 kV / 50 Hz. The replacement Solar factory-refurbished gas turbine was installed in June 2023 and has accumulated only approximately 16,000 operating hours. Both turbines received OEM overhaul service in mid-2025.

Gas-turbine exhaust is recovered in an LC Cable / Descon-type water-tube HRSG with supplementary duct burner, producing up to 30 t/h of steam at 42 bar. Low-pressure exhaust steam from the back-pressure turbine is used by the absorption-chiller system to produce chilled water. The package also includes fuel-gas compression, GEA Westfalia diesel purification, Siemens PLC automation and an extensive original spare-parts inventory.

**Solar Mars 100 Gas Turbine Package**



**Solar Mars 100 Gas Turbine Package**  
Actual plant photograph

**LS Absorption Chiller System**



**LS Double-Effect Absorption Chiller**  
Actual plant photograph

# TECHNICAL SPECIFICATIONS

Technical data provided for preliminary sales and project evaluation.

PARAMETER	SPECIFICATION
<b>Main equipment manufacturers</b>	Solar Turbines / Siemens / LS / Leroy Somer
<b>Plant configuration</b>	Combined-cycle CHP and trigeneration plant
<b>Commissioning year</b>	2007
<b>Total electrical capacity</b>	12.5 MWe / 11 kV / 50 Hz
<b>Cooling capacity</b>	Approx. 1.6 MWth at 12°C inlet / 7°C outlet
<b>Fuel capability</b>	Natural gas / Light Fuel Oil (LFO)
<b>Gas turbine</b>	Solar Turbines Mars 100 dual-fuel
<b>Gas turbine output</b>	Approx. 10 MWe
<b>Replacement gas turbine</b>	Solar factory-refurbished unit installed June 2023
<b>Hours since replacement</b>	Approx. 16,000 operating hours
<b>Reduction gearbox</b>	Renk MAAK GPF3-28
<b>Generator</b>	Leroy Somer LSA 58, 12,500 kVA
<b>Fuel-gas compressor</b>	Enerproject EGS-S-400/400
<b>Diesel fuel purifiers</b>	2 × GEA Westfalia OSE 20-01-037, year 2023
<b>Heat-recovery steam generator</b>	LC Cable water-tube HRSG with duct burner
<b>Steam capacity</b>	Up to 30 t/h at 42 bar and approx. 255°C (491°F)
<b>Steam turbine</b>	Siemens SST 060 back-pressure, approx. 2.5 MWe
<b>Absorption cooling system</b>	LS double-effect absorption chiller system
<b>Control system / maintenance</b>	Siemens S7-300 PLC; both turbines OEM-overhauled mid-2025

**Performance note:** Final electrical, steam and cooling performance remains subject to ambient conditions, fuel quality, steam conditions, chilled-water temperatures, auxiliary loads, final battery limits and agreed test procedures.

# SCOPE OF SUPPLY & CONTACT

The following scope is based on the currently available sales information and remains subject to final confirmation.

## INCLUDED EQUIPMENT

- ✓ Solar Turbines Mars 100 dual-fuel gas-turbine package
- ✓ Renk MAAK GPF3-28 reduction gearbox
- ✓ Leroy Somer LSA 58 generator, 12,500 kVA
- ✓ LC Cable water-tube HRSG with supplementary duct burner
- ✓ Siemens SST 060 back-pressure steam turbine
- ✓ LS double-effect absorption chiller system
- ✓ Enerproject fuel-gas booster compressor
- ✓ 2 × GEA Westfalia diesel fuel purifiers, year 2023
- ✓ Electrical and mechanical auxiliaries with Siemens PLC controls
- ✓ Original spare-parts inventory for major equipment

## DELIVERY & INSPECTION

- Plant maintained in good operational condition
- Solar factory-refurbished gas turbine installed in June 2023
- Approx. 16,000 operating hours on replacement gas turbine
- Gas and steam turbines OEM-overhauled in mid-2025
- Inspection and detailed operating-data review available by arrangement
- Final battery limits and equipment list subject to confirmation
- Dismantling, packing, transport and reinstallation may be arranged separately

## RELOCATION & SITE INTEGRATION

The final relocation scope must address gas and LFO supply, HRSG and steam-system integration, back-pressure steam conditions, chilled-water circuits, cooling-water systems, electrical integration, protection and grid connection. Dismantling, preservation, transport, reinstallation and recommissioning must be engineered for the destination site and agreed in the final contract.

## REQUEST FURTHER INFORMATION

*Commercial quotation, additional plant photographs, detailed scope clarification, technical documentation, inspection and operating-data review are available on request.*

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**SCAN FOR ONLINE LISTING**

*All information is provided in good faith for preliminary evaluation and is subject to verification, final scope confirmation and contract.*