



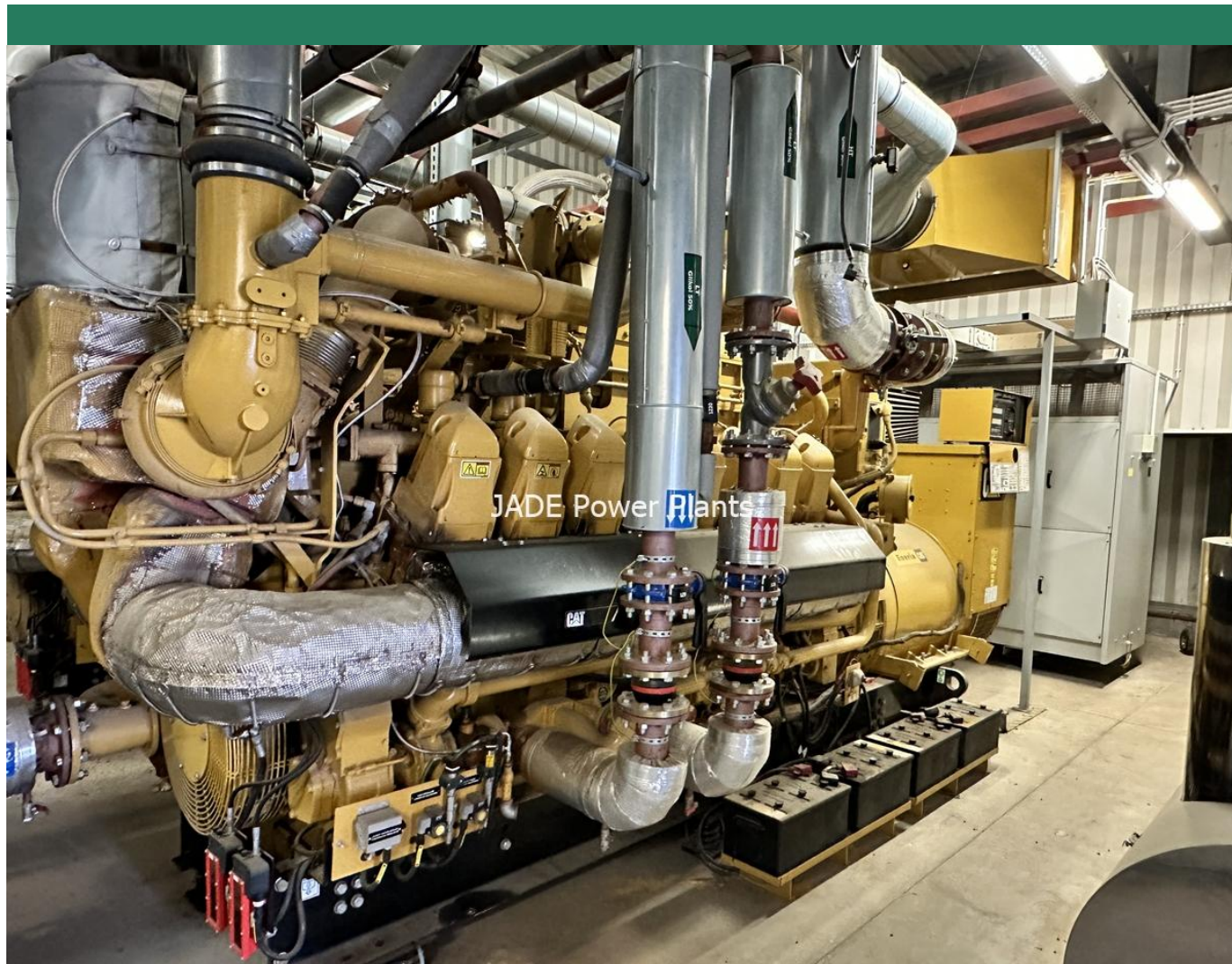
JADE Power Trading
Quality Energy Equipment

PRODUCT
BROCHURE
REF.
9752023

COMBINED HEAT & POWER PLANT

2 × CAT G3516C - 2.4 MWe

2.74 MWth | 400 V | 50 Hz | Year 2013



2.4 MWe
ELECTRICAL OUTPUT

2.74 MWth
THERMAL OUTPUT

81.1%
TOTAL CHP
EFFICIENCY

16,000 / 19,000
h
OPERATING HOURS

LOW OPERATING HOURS • INTEGRATED HEAT RECOVERY • INSTALLED & OPERATIONAL

EQUIPMENT OVERVIEW

Well-maintained gas-fired CHP capacity with integrated hot-water recovery and Schneider electrical equipment.

CAT G3516C GAS-FIRED CHP POWER PLANT

This complete combined heat and power plant was built in 2013 by a local Caterpillar dealer and is equipped with two CAT G3516C gas engine-driven generating sets. Each unit delivers 1,200 kW of electrical power at 400 V / 50 Hz together with approximately 1,370 kWth of recoverable heat for hot-water production.

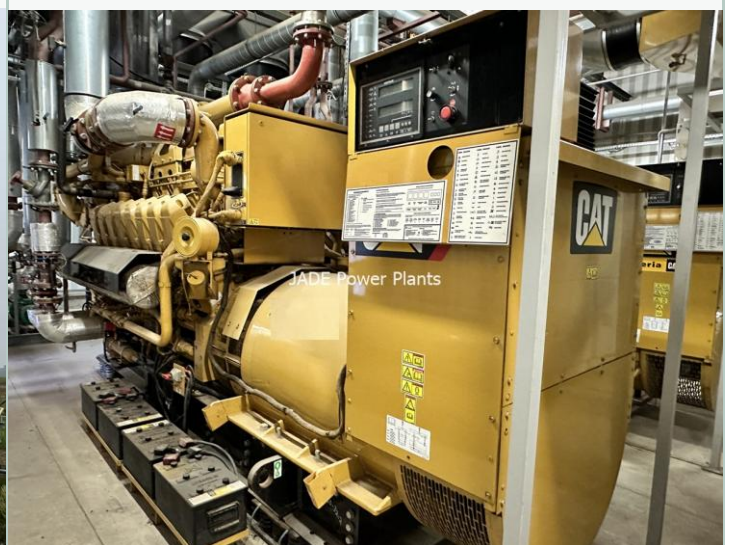
The plant operated until mid-2016 and remains installed and operational. The engines have accumulated approximately 16,000 and 19,000 operating hours respectively. Maintenance has been carried out by the local CAT dealer in accordance with the maintenance manual, and no major breakdowns have been reported.

The heat-recovery arrangement comprises two circuits: one recovering heat from engine jacket water and the second stage of the charge-air cooler, and another recovering heat from the first stage of the charge-air cooler and the exhaust gas. The Aprovis tubular exhaust-gas heat exchangers are equipped with bypass capability.

Picture outside of the plant



Genset picture 2



TECHNICAL SPECIFICATIONS

Technical data provided for preliminary sales and project evaluation.

PARAMETER	SPECIFICATION
Manufacturer / integrator	Caterpillar / local CAT dealer
Plant configuration	2 × CAT G3516C gas CHP generating sets
Manufacturing year	2013
Operating status	Installed and operational; operated until mid-2016
Electrical output	2 × 1,200 kW / 400 V / 50 Hz
Operating hours	Approx. 16,000 h and 19,000 h
Thermal output	2 × 1,370 kWth; hot water up to 85 °C
Fuel characteristics	Natural gas with low CH ₄ and high N ₂ content
Fuel-gas calorific value	16.5 MJ/Nm ³
Alternator type	CAT SR4B
Step-up transformers	2 × Schneider 1,600 kVA - 400 / 15,750 V
MV circuit breakers	2 × Schneider S1
Exhaust-gas heat exchangers	2 × Aprovis N-22-600/3000-1H with bypass
Plate heat exchangers	Sondex
Engine cooling system	2 × GEA RGF radiators with 6 fans
Engine control system	Standard CAT control with Siemens logic
Electrical efficiency	37.9%
Thermal efficiency	43.3%
Total CHP efficiency	81.1%

Reported emissions at 5% O₂: NO_x 500 mg/Nm³; CO 1,232 mg/Nm³; total hydrocarbons 1,858 mg/Nm³; non-methane hydrocarbons 685 mg/Nm³. Final performance and emissions remain subject to verification of current condition, fuel composition, ambient conditions 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

- ✓ 2 × CAT G3516C gas engine generator sets with CAT SR4B alternators
- ✓ Engine jacket-water and charge-air heat-recovery circuits
- ✓ 2 × Aprovis exhaust-gas heat exchangers with bypass arrangement
- ✓ Sondex plate heat exchangers and associated hot-water equipment
- ✓ 2 × GEA RGF radiator cooling systems with fan assemblies
- ✓ 2 × Schneider 1,600 kVA step-up transformers
- ✓ Schneider medium-voltage switchgear and circuit breakers
- ✓ CAT engine controls with Siemens logic
- ✓ Steel-frame plant building with switchgear room, liquid-storage room and engine-room noise insulation

DELIVERY & INSPECTION

- Plant remains installed and operational according to the listing
- Maintenance history reported from the local CAT dealer
- Detailed inspection and operating test available by arrangement
- Final scope, battery limits and component list subject to verification
- Dismantling, packing, transport and reinstallation may be arranged separately
- Final commercial and delivery terms subject to contract

FUEL, HEAT & SITE INTEGRATION

The destination project must verify compatibility with the available fuel-gas composition and calorific value, hot-water temperature and flow requirements, electrical interconnection, transformer and protection philosophy, exhaust routing, emissions limits, ventilation, cooling, building interfaces and local regulations. Final performance should be confirmed through agreed operating and heat-balance tests.

REQUEST FURTHER INFORMATION

Commercial quotation, additional plant photographs, detailed scope clarification, technical documentation, inspection and operating-test arrangements 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.