



REFERENCE

viledon®

UPGRADE TO EPA FILTRATION LEVEL FOR SOLAR MERCURY 50 GAS TURBINE

Introduction

The project was to build a new air intake house for a printing company with three filter stages instead of the existing two stages.

Initial situation

Initially, the air intake housing was fitted with MP45KTC filter cells and MX95 cassette filters.

- The efficiency of the existing filter system was not high enough and the user wanted to get rid of any washing procedure.
- The printing plant generated waste steam energy that the plant operator planned to reuse with a water chiller in front of the turbine air intake.

Viledon® solution

Installation of a complete new filter house with a water chiller behind the first stage.

In the first stage, the engine intake and package air is filtered with T60 pocket filters.

The second and third stages are equipped with MX95 and MXH10 cassette filters. The air filtered in these stages is used for combustion and achieves EPA filtration level.



Viledon®
Compact pocket
filter T60

Viledon® cassette filter
MX95 / MXH10



Existing filter house





New filter house

Benefits for the user

- Extended lifetime of the prefilter and the final filter systems, along with improved efficiency.
- Reliable and clean operation of the gas turbine's compressor sections.
- Use of waste heat from the printing process.
- Trouble-free operation of the new system is expected for >12 months without any filter change.
- Improved monitoring of all pressure drop values.

Additional engineering work necessary

- Installation of a large substructure, because the building hall was not strong enough.
- Short time (only 10 hours) to change the filterhouse.
- Extremely precise planning necessary.



Special substructure to optimize structural rigidity of the building hall

KEY DATA

Location

Printing plant Jungfer Druck und Verlag GmbH in Herzberg, Germany, in cooperation with Turbomach, Griesheim.

Gas turbine

Solar Mercury 50 (Packaged by Turbomach)

Intake air flow rate per unit

54,000 m³/h (approx. 17 kg/s)

Intake air system / filters fitted

3-stage filter system
 1st stage: 25 T 60 pocket filters
 2nd stage: 25 MX95 cassette filters
 3rd stage: 25 MXH10 cassette filters

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Freudenberg Filtration Technologies SE & Co. KG

69465 Weinheim, Germany

Phone +49 (0) 6201 80-6264 | Fax +49 (0) 6201 88-6299

viledon@freudenberg-filter.com | www.freudenberg-filter.com



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