

## **Natural Gas Engines Water Treatment Facility**

### ***The Challenge***

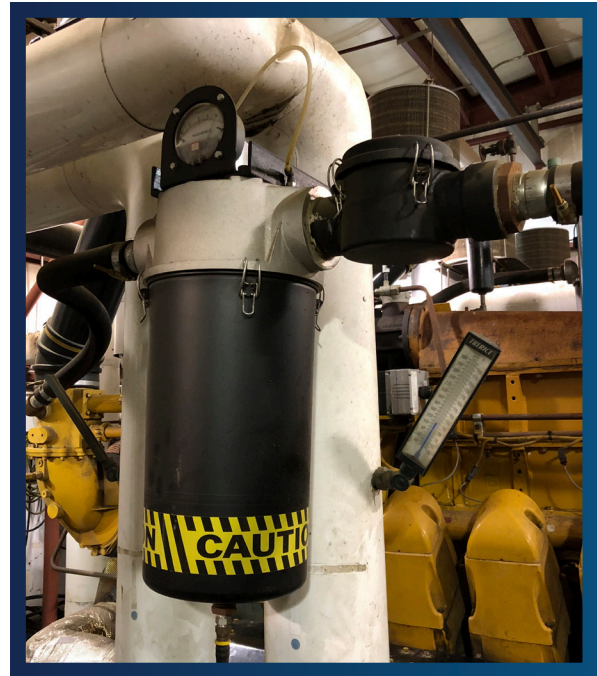
A private energy company was looking to solve their crankcase blow-by oil mist issues. The oil mist was venting from their four Caterpillar G3520C natural gas engines which were generating power at a water treatment plant on the eastern coast of the United States. They were looking for a cost effective, closed crankcase solution that would require minimal maintenance and no unscheduled downtime due to maintenance.

### ***The Solution***

Solberg provided its ACV Series Advanced Crankcase Ventilation System which includes Solberg's vacuum regulation technology. The Solberg vacuum regulation valve maintains a precise range of vacuum that is best in the industry. This ensures the vacuum levels are at an acceptable range set by the OEM. After calculating the crankcase blow-by and drawing on field tests, two units (one per side) would be required per engine.

### ***Results***

The Solberg ACV units, with their high efficiency coalescing filter, successfully captured the oil mist and drained it back to the engine crankcase. The ACVs were run in the closed configuration and provided the clean, filtered, crankcase blow-by back to the intake manifold along with a consistent level of vacuum in the crankcase. The first coalescing filter element was changed out at 8000 hours of operation.



Rev: G3520C-US1903K

## Solberg Products Provided

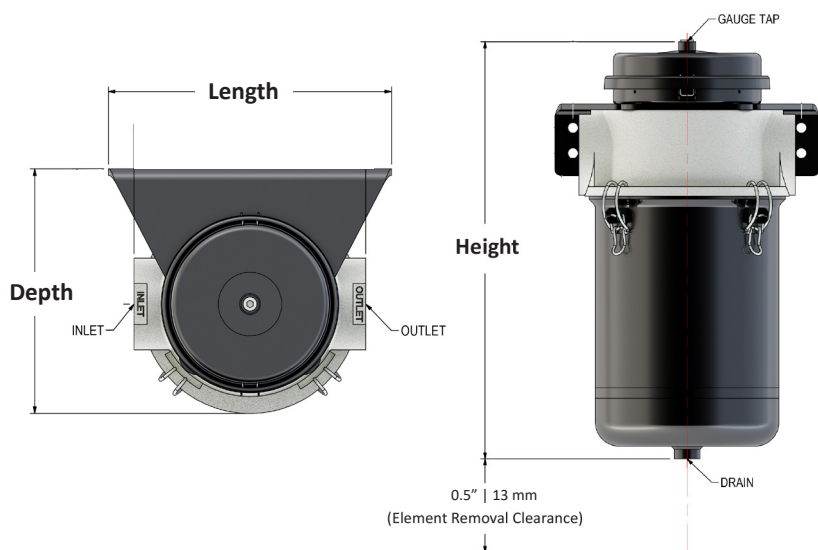
ACV-1-40-300L

ACV-1-40-300R

Advanced Crankcase Ventilation System

## The Product

The ACV is designed to protect your engine's turbo, coolers, and inlet air filters as well as help ensure environmental compliance while keeping engine rooms clean, safe & free of oil mist. The series comes standard with industry leading automated vacuum control technology to regulate crankcase pressure and prevent seal leakage. The replaceable filter element contains a proprietary media pack offering exceptional efficiency levels with an extremely long life, allowing operators up to one year before an element change is required.



## ACV Design Features

- Eliminates visible emissions (99%+ efficient at 0.3 um)
- High performance coalescing elements offer long life
- Flow ranges from 2 - 40 CFM (3 - 68 m<sup>3</sup>/hr) for single units
- Integrated vacuum control valve controls precise range of vacuum
- Diaphragm vacuum regulation valve design, no springs; No manual vacuum adjustment required
- Drain port for oil recovery
- Universal mounting bracket
- Available with installation kits
- Optional atmospheric bypass

PART NUMBER	ACV-1-40-300L/R
INLET/OUTLET	3" NPT
DRAIN	1" NPSC
GAUGE TAP	.25" NPSC
FLOW RATE	40 CFM   68 m <sup>3</sup> /hr
HEIGHT	28.6"   718 mm
LENGTH	10"   254 mm
DEPTH	14.7"   374 mm



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All model offerings and design parameters are subject to change without prior notice. Contact your representative or Solberg for the most current information.