CONTINENTAL CONTROLS CORPORATION

– A VALVE YOU CAN TRUST –

AGV50 PILOT

ADVANCED GAS VALVE

BENEFITS

- Closed-loop on flow control improves turbine emissions
- Spring-return, fail-safe closed operation
- High tolerance to dirt and debris
- Pilot-actuated off supply pressure
- Modbus protocol for diagnostics, existing system integrations, data display and logging
- Power: 24 VDC @<1 amp
- Voice-coil-actuated valve delivers full stroke in less than 100 ms
- Maintains flow accuracy within 2% range
- Utilizes a Venturi orifice for a more stable flow measurement
- Consistent flow control even with high back pressure constraints
- Custom design for lean burn combustion requirements of DLE
- Venturi is designed for maximum pressure recovery
- Drop-in compatibility reduces installation costs
- Onboard diagnostics
- Flow accuracy results in more reliable starts

GAS FUEL METERING VALVES FOR GAS TURBINES

The AGV50 Pilot meters natural gas for gas turbine engines from 5,800–45,594 hp. It controls the pilot section of the combustor to avoid flame out in a dry low NOx combustor.

By controlling closed-loop on flow, the AGV50 Pilot eliminates variations in fuel flow due to changes in fuel pressure or other ambient changes.

This valve is specifically designed to control fuel flow to DLE pilot fuel ejectors. This application is demanding due to high back pressure and low flows. The Venturi in the AGV50 Pilot is designed to maximize accuracy while minimizing effects of high back pressure.

AGVs provide an optimal interface between the control system and the turbine combustor. Linear control design ensures the fuel flow matches the 4–20 mA demand signal from the engine's PLC accurately.

The built-in flow meter delivers true mass flow readings that remain stable for precise control, regardless of pressure or temperature fluctuations.



AGV50 PILOT

FUEL METERING VALVE

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AGV50 PILOT SPECIFICATIONS

Maximum fuel flow capacity:	Flow dependent on engine application
Fuel:	Natural gas, propane, ethane, biogas, and other gaseous hydrocarbons
Applications:	Up to 45,594 hp (34.0 MW)
Maximum operating pressure:	500 psig
Filtration requirement:	10–20 micron absolute
External pilot filtration requirement:	0.01 micron absolute
Operating temperature:	-40°C (-40°F) to +85°C (+185°F) -20°C (-4°F) to +85°C (+185°F) [ATEX]
Response time:	100 ± 10 ms (10–90% flow command)
Flow accuracy:	±3.0% of reading or 0.5% of full scale
Fuel demand signal [to fuel control valve]:	4–20 mA (standard) 0–50 mA (optional), 0–200 mA (optional)
Fuel demand signal [from fuel control valve]:	4–20 mA (standard)
Power input:	19–30 VDC, 1.0 A max
Electrical interface:	3/4" ridged conduit, 84" pigtail wires
Data communication interface:	Modbus over RS-485
Wetted materials:	6061-T6 anodized aluminum, 300 series stainless steel, Viton® seals, nitrile seals
Flanges:	2" SAE series 61, 4-bolt flange
Dimensions:	15.8"L x 8.75"H x 6.5"W
Approximate weight:	48.2 lbs
Environmental protection:	IP66 rating
Certifications:	C SA US Class I, Div 1, 2, Group D: T4 Ex II 2 G EX d IIA CE 0344 UKCA 8505 Pressure Equipment Directive **(PED)** CE 0036 UKCA 0168

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ISO 9001 CERTIFIED