

EZ[®] Series: Modular Endothermic Gas Generator

Advanced Design for Practical, Efficient,
Expandable Operation



EZ[®] Series

Best in Class from a Market Leader

AFC-HOLCROFT MODULAR GENERATORS are compact and designed to be located in areas traditionally unsuitable due to low ceiling height. Multiple module configurations provide the ability to expand capacity with ease.



Hinged retort access door for easy retort maintenance

Modular / Expandable

- Single vertical retort per module
- Easy access to retort via hinged door
- Demand-based generator controls
 - Standalone: 1800 CFH
 - 1 module: 4500 CFH
 - 2 modules: 9000 CFH
 - 3 modules: 13500 CFH

AutoGen standard on AFC-Holcroft EZ[®] Generator



Advanced control

- Precise gas mixing
- Multiple customizable control loops
 - Temperature
 - Dew point
 - Pressure
- Fully automatic air/gas flow and turndown
- Dedicated burnout/purge blower
- Advanced HMI touch screen
- Robust I/O set
- AutoGen standard on AFC-Holcroft EZ[®] Generator

KEY FEATURES

- Built-in chart recorder – Trending of all process data: Endo flow, ratio, dew point, outlet temperature
- 6:1 turndown or better – Included in base price
- Automatic air/gas ratio control
- Fine control – Separate, automated gas trim valve
- Auto-corrects ratio-to-dewpoint – Bump feature +



Advanced HMI touchscreen

- Automatic header pressure control loop – VFD blower
 - Eliminates travel-stop (bypass) regulator
 - Negative draw requires only 1.5 psi gas pressure
 - Eliminates higher (5 psi) gas utility
- Ceramic fiber module insulation – 12 in (305 mm)
- Heat exchanger – Low outlet temperature (monitored)
- Built-in chart recorder – Trending of all process data: Endo flow, ratio, dew point, outlet temperature



+ AFC-Holcroft exclusive OEM feature on new generators

- Automated ratio-to-dewpoint – Adjusts ratio without operator intervention +
- Normal operation:
 - Dual-valve (automated coarse and trim) concept developed by AFC-Holcroft
 - Trim valve allows fine air/gas adjustments without disrupting coarse PID loop
- “Bump” auto-correct operation:
 - Reacts if trim valve sits near its extreme (open or closed) for too long.
 - Adjusts coarse ratio within limits – Re-centers trim valve
 - Deviation from dew point determines magnitude of coarse adjustment (bump).
- Configurable
 - Set delay before bump occurs
 - Adjust trim position that triggers bump (10%, 20%, etc.)
 - Enable/Disable bump auto-correct as desired

AUTOMATED OPERATION, INTUITIVE USER INTERFACE

- Heat-up cycle – Automated dry out and ramp-to-temp
- Burnout cycle – Automates steps to burnout catalyst.
- Dew point control – Reduces operator intervention +
- HMI – Easy navigation, anti-glare screens
- On-screen fault troubleshooting +
 - Step-by-step tips explain how to resolve each alarm
- On-screen Owner’s Manual +
 - Link from HMI screen to key procedures: Startup, shutdown, emergency procedures
- Multilingual screens – Global language support
- User roles – Password protect advanced screens

ENDOTHERMIC GAS AT A GLANCE

- Protective atmosphere created by partial reaction of an air-gas mixture
- Mixture occurs in an externally heated, catalyst-filled chamber (retort)
- Gas “cracking” produces protective atmosphere

CO	CO ₂	H ₂	CH ₂	N ₂
19.5 - 20.4%	0.0 - 0.3%	38.7 - 40.0%	0.0 - 0.4%	38.8 - 40.1%

Raw Components	→	Resulting Components	Typical Gas/Air Ratio
73% Air 27% Methane 1,904°F (1,040°)	→	40% Nitrogen 40% Hydrogen 20% Carbon Monoxide 0.2 - 0.5% CO ²	2.7:1