



DRIVING OPTIMAL PERFORMANCE

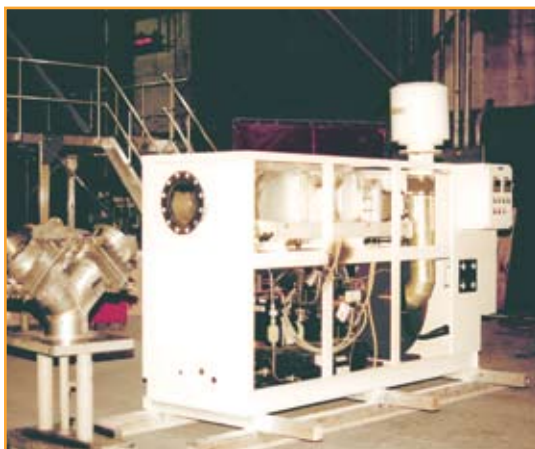
# CONDITIONED COMBUSTION AIR SUPPLY (CAS) SYSTEM

ETC's Conditioned Air Supply (CAS) System provides combustion air for test engines and dilution air for exhaust measurement systems. The system delivers air at precisely controlled temperature, humidity, pressure and flow rate and is also free from pollutants. ETC's CAS System eliminates the uncertainties arising from variations in air temperature, humidity and pressure.

ETC's CAS technology provides psychrometrically-controlled air for improving the accuracy and repeatability of performance and development testing. The adverse effects of variations in temperature, humidity, and barometric pressure are completely eliminated by utilizing the CAS unit and Engine Pressure Control (EPC™) device.

The Conditioned Air Supply System is made up of three sub-assemblies. The CAS unit, which draws in ambient air and conditions it for temperature and humidity to the precise setpoint conditions. The Engine Pressure Control (EPC™) device is an integrated aerodynamic valve system, which modulates the airflow rate and controls the barometric pressure at which air is delivered to the engine inlet. This modulation is controlled in accordance with engine demand, resulting in stabilization of the desired engine inlet pressure, while maintaining constant airflow rate through the psychrometric conditioning section of the CAS system. The Control Console houses all operator interface and process parameters.

ETC's design is based on our decades of experience in providing quality test equipment to the Automotive industry.



**APPLICATIONS**

- Combustion engine research and development testing • Diesel engine research and development testing
- Aircraft engine research and development testing • Emissions certification testing
- Dilution tunnel air supply systems • Constant volume supply systems • Fuels and lubrication development
- Automotive climate control development

**FEATURES**

- Barometric compensation • Altitude compensation • Low noise pressure control devise
- Conditioned air supply for multiple cell configurations • Small foot print • Indoor / outdoor locations

	<b>RANGE</b>	<b>CONTROL STABILITY</b>
Drybulb Temperature (standard).....	55 to 105°F (12 to 45°C).....	±0.5°F (±0.25°C)
Drybulb Temperature (medium).....	34 to 105°F (1.1 to 45°C).....	±0.5°F (±0.25°C)
Drybulb Temperature (extended) .....	-22 to 105°F (-30 to 45°C) .....	±0.5°F (±0.25°C)
Dewpoint Temperature .....	40 to 80°F (4 to 27°C).....	±0.5°F (±0.25°C)
Standard Airflow Rates (cfm): .....	200, 500, 750, 1200, 2500, 4000	
Pressure Control:.....	Ambient to 1.2" Hg boost .....	±0.04" Hg (1.0 mm Hg)

\*Custom CAS performance ranges are available, contact ETC for details..

**OPTIONS**

- Custom designed systems to meet special requirements
- Low dewpoint temperature systems
- Sub zero temperature systems

