

POWERFUL COMPETITIVE ADVANTAGES

Tiger Optics HALO OK vs Servomex DF-560/550

	Servomex DF-560/550 (O ₂)	Tiger Optics HALO OK (O ₂)
Calibration	Requires calibration EVERY WEEK. OFFLINE ~ 1 HOUR. Annual span calibration for O ₂ sensor (usually not performed onsite - customer must initiate service call).	Zero is verified continuously and automatically while analyzer remains ON-LINE. <u>NOTE:</u> Absolute, high-resolution optical technique confirms true spectroscopic zero directly.
<i>Impact</i>	Costs result from downtime, labor and consumables (standard gas cylinder, purifier, electrolyte solution) required	Great stability, with continuous performance with no external calibration or consumables required
Requires Purifier	Needs purifier to do calibration	Internal purifiers with estimated life of ~ 10 years in Semi bulk gas
<i>Impact</i>	<ul style="list-style-type: none"> • Extra cost for purifiers (~\$400 USD/year per sensor) • Purifier eventually fails, giving negative values • If user sets software to prevent negative values, there is no way to know if purifier fails 	<ul style="list-style-type: none"> • Expense for replacement after ~ 10 Years • Purifiers can be replaced in situ in about one hour.
Sensor Replacement	Some users report sensor replacement needed 4~6 years.	NONE required.
<i>Impact</i>	<ul style="list-style-type: none"> • Cost currently estimated at \$10,000 per sensor • Analyzer offline for duration of repair 	No cost or downtime for sensor maintenance
Annual routine running cost	~\$500 (Add solution monthly, required calibration and electrolyte replacement).	ZERO running costs
<i>Impact</i>	Higher running cost	Very low CoO
Flow Regulator	Manual pressure regulator and bypass rotameter with valve	Fixed outlet pressure regulator and orifice internal to sensor, with no user adjustment
<i>Impact</i>	Time consuming and costly, with potential for mistakes: <ul style="list-style-type: none"> • Pressure regulator requires manual adjustment • Bypass rotameter requires manual adjustment 	Easy, automatic and safe: <ul style="list-style-type: none"> • Automatically set • No manual intervention required • Components internal to system
N₂, Ar, He, and H₂ Sample Gas Compatibility	N₂, Ar, He, and H₂ only	N₂, Ar, He, H₂, and other inerts, such as CO₂.
<i>Impact</i>	Limits usage	Wide usage, highly versatile
Response to upset	Close to 1 HOUR	THREE MINUTES; typically less than one minute!
<i>Impact</i>	Time is money (lost).	Fast response saves money, cuts downtime and helps process control