

epServices
for premium performance



DASGIP® GA4

DASGIP GA4 Performance Plans

Bioprocess systems include several sophisticated technologies. Peak performance requires smooth interplay of the subsystems and fully functioning consumable parts. Regular maintenance by qualified engineers helps to ensure reliable operation, while deferring it can cause unreliable results, expensive repairs, and prolonged downtime.

The DASGIP GA4 exhaust analyzer supports precise online measurement of exhaust oxygen and carbon dioxide in four discrete analyzer channels. The online monitoring of oxygen transfer rate (OTR), carbon dioxide transfer rate (CTR), and

respiratory quotient (RQ) permits direct conclusions on the metabolic state of the culture and allows implementation of online feedback loops. As the GA4 gas sensors have a limited working lifetime, regular maintenance is essential to obtaining reliable experimental data.

Eppendorf Bioprocess Performance Plans help you to maintain the optimal performance of your equipment over years of frequent use.

Bioprocess maintenance — see the advantage!

eppendorf

Performance tested on

Model: _____

Serial no.: _____

Serviced by: _____

Service no.: _____

Next service: _____

Date: _____

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DASGIP® GA4 Performance Plans

Service Operation	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification/ Operational Qualification (IQ/OQ)*
Order Number	0082 150 203	0082 150 204	0082 150 205	0082 150 209
External Inspection				
General condition of DASGIP® GA4 module and attached cables	■	■	■	■
Internal Inspection				
Check/update of firmware	■	■	■	
Check/exchange of internal battery	■	■	■	
Check of internal settings	■	■	■	■
Check lifetime of gas sensors	■	■	■	
Verification				
Characterization of gas sensor performance with air	■	■	■	■
Characterization of gas sensor performance with test gas**	■	■	■	■
Characterization of mass flow sensor performance	■	■	■	■
Calibration and Adjustment				
Calibration and adjustment of mass flow sensors		■	■	
Calibration and adjustment of ambient pressure sensor		■	■	
1-point calibration of gas sensors with air	■			
2-point calibration of gas sensors with air and test gas**		■	■	■
Documentation				
Check list provided	■	■	■	
Dated service sticker to confirm Eppendorf service	■	■	■	■
IQ/OQ report and certificate				■
Supporting Information				
Contract period	one year	one year	one year	n/a
Number of preventive services included	one	one	one	n/a
Costs of repair/parts replacement outside scope of preventive maintenance visit (where Eppendorf product warranty has expired)	not included	not included	discount on parts, labor, travel time	n/a

* Separate purchase of IQ/OQ documents will be necessary

** Test gas has to be provided by customer

Order numbers for additional, inhouse services:

- | | |
|---|---|
| <p>GA4:</p> <ul style="list-style-type: none"> > GA4 sensor train inspection (O₂/CO₂): 77 105 000 > GA4 sensor train maintenance (O₂/CO₂/flow): 77 105 001 > GA4 maintenance (4x O₂/CO₂): 77 105 002 | <p>GA4E:</p> <ul style="list-style-type: none"> > GA4E sensor train inspection (O₂/CO₂): 77 105 039 > GA4E sensor train maintenance (O₂/CO₂/flow): 77 105 040 > GA4E maintenance (4x O₂/CO₂): 77 105 041 |
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Your local distributor: www.eppendorf.com/contact
 Eppendorf AG · Barkhausenweg 1 · 22339 Hamburg · Germany
eppendorf@eppendorf.com · www.eppendorf.com

www.eppendorf.com/epServices