



# Bioprocess Equipment

## Value of Service

A 1-year warranty comes with all Eppendorf Bioprocess Instruments<sup>1</sup>. Choose Premium Service, Advantage OS, or an Annual Preventive Maintenance to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

## Premium Service

- > Complete maintenance and repair service agreement solution
- > Advanced Maintenance Service
- > All parts, labor, and travel fees covered during contract period
- > May be purchased in 1-year increments or for multiple years and systems
- > Upgrades products serviced in house to on-site service

## Certification Services (IQ/OQ)

Installation Qualification & Operational Qualification services assure that instrumentation is installed and running according to manufacturer specifications. IQ/OQ documentation is supplied to help prepare for quality and regulatory audits. Travel is included for IQ/OQ services, but is not included with OQ. This is a one time event. The warranty period for the instrument will begin once the IQ/OQ is complete or 30 days after shipment, whichever is first.

<sup>1</sup> Does not apply to vessels.

**With epServices we are committed to providing sincere, reliable services and tools to help you maintain premium performance of our instruments and your applications.**

## Preventive Maintenance

Preventive Maintenance (PM) is aimed at the prevention of unexpected downtimes through routine maintenance and early detection of problems. We recommend that all Eppendorf products have an annual Preventive Maintenance.

### Essential Check

- > Check of all fundamental functions of the product
- > Visual inspection of equipment housing
- > Visual inspection and check of accessories
- > Performance of system test run
- > Functional evaluation of electronic display, software version and memory storage
- > Validation and adjustment of operating parameters to Eppendorf specifications

### Advanced Maintenance

- > Preventive Maintenance service beyond Essential Check to meet manufacturer specifications
- > Cleaning of housing and accessories
- > Visual inspection and cleaning of internal parts and assemblies
- > Functional evaluation of sensors (where applicable)
- > Temperature verification and calibration (if required)
- > Software Updates (if required)

# Bioprocess Small Scale Performance Plans

## Premium Service<sup>2</sup>

Provides peace of mind full service including all parts, labor and travel used in maintaining the product as well as a Preventive Maintenance. Parts such as probes, filters and glassware are not covered, however a 20 % discount does apply to these items when replaced at the time of service.

Premium Service	Catalog No.
<b>Small Scale Product Line<sup>3</sup></b>	
DX/Small 4 Vessels	DASPREMSA-04
DX/Small 4 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-04
DX/Small 8 Vessels	DASPREMSA-08
DX/Small 8 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-08
DX/Small 12 Vessels	DASPREMSA-12
DX/Small 12 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-12
DX/Small 16 Vessels	DASPREMSA-16
DX/Small 16 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-16
DX 20 Vessels	DASPREMSADX-20
DX 20 Vessels w/GA4 <sup>4</sup>	DASPREMSADX-GA-20
DX 24 Vessels	DASPREMSADX-24
DX 24 Vessels w/GA4 <sup>4</sup>	DASPREMSADX-GA-24

<sup>1</sup> Does not apply to vessels.

<sup>2</sup> These descriptions generally apply for all Bioprocess systems with variations noted for applicable Preventive Maintenance.

<sup>3</sup> Includes Software Maintenance Plan.

<sup>4</sup> Includes parts for the refurbishment of sensor trains for the GA4 module.

## Advantage OS<sup>2</sup>

This value added service provides 2 visits; an Annual Preventive Maintenance with PM parts (including bearing housing rebuild) and a single repair visit within the year. Labor, travel, and a 20 % discount on all repair parts (including sensor train refurbishment if applicable) are included. Should there be a need for one more repair visit over the course of a year the customer may opt to use both visits for repairs and may renew the agreement early if both visits are utilized prior to the 1-year term.

Advantage OS	Catalog No.
<b>Small Scale Product Line</b>	
DX/Small 4 Vessels	DASADVSA-04
DX/Small 4 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-04
DX/Small 8 Vessels	DASADVSA-08
DX/Small 8 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-08
DX/Small 12 Vessels	DASADVSA-12
DX/Small 12 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-12
DX/Small 16 Vessels	DASADVSA-16
DX/Small 16 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-16
DX 20 Vessels	DASADVSA-20
DX 20 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-20
DX 24 Vessels	DASADVSA-24
DX 24 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-24

<sup>5</sup> 20 % discount includes parts used for refurbishment of sensor trains on the GA4 module.

## Annual Preventive Maintenance (PM)

Bioprocess systems include several sophisticated technologies. Peak performance requires smooth interplay of the subsystems and fully functioning wear parts. Regular annual maintenance by qualified engineers helps to ensure reliable operation. This is a labor agreement to perform a PM on-site. The system will be inspected, tested and/or adjusted according to specific protocols. Gas modules are inspected and calibrated but maintenance service is not included. Results will be documented and available for review in an electronic maintenance report. Travel and additional wear parts beyond the included bearing assembly and service of additional customer installed items are not included.

### Annual Preventive Maintenance

Description	Catalog No.
<b>Small Scale Product Line</b>	
DX/Small 4 Vessels	DASPM-04
DX/Small 8 Vessels	DASPM-08
DX/Small 12 Vessels	DASPM-12
DX/Small 16 Vessels	DASPM-16
DX 20 Vessels	DASPM-20
DX 24 Vessels	DASPM-24

# Bioprocess Bench Scale Performance Plans

## Bench Scale Performance Plans (depending on vessels)

BioFlo 115, 120, 310, 320 systems utilizing glass vessels require annual Advanced Maintenance to assure continued performance of the vessel assembly. These customers may also be offered Advantage OS and Premium plans which include Advanced Maintenance. Extended Warranty is only available on systems including CelliGen BLU that utilize single use vessels where no annual vessel maintenance is required but a protection plan for the controller is desired.

## Certification Services (IQ/OQ)

The IQ is conducted on-site by an Eppendorf Field Service Engineer. The IQ will assure that the equipment setup has been performed as per Eppendorf standards for the controller, vessel and process system and that the utilities are prefiltered and regulated as per the requirements detailed in the Operators Manual. A final report will be provided to the customer upon completion of the IQ.

The OQ is conducted on-site by an Eppendorf Field Service Engineer. The OQ protocol has been developed to qualify that the system operates in accordance with Eppendorf's defined specifications. The Field Service Engineer will verify that the general system settings and functionality are to specified standards, that the control limits of the installed control loops are per Eppendorf's published standards and that the controllers meet all the high and low set-points as defined. A final report will be provided to the customer upon completion of the OQ. For those systems that utilize a BioBLU single use vessel in lieu of glass or stainless steel, a vessel will be required in order to perform the OQ. The required vessel will be supplied by the customer.

## Annual Preventive Maintenance (PM)

To ensure the performance of the Eppendorf Bench Scale systems annual maintenance is highly recommended. These services provide all labor, parts and documentation to complete a full maintenance service. Systems will be inspected, tested and or/adjusted according to specific protocols. All results will be documented and available for review in an electronic maintenance report. Additional parts required beyond the included PM parts kits to restore system performance, additional customer installed items, calibrations, and travel are not included. Customers with needs or requirements outside of Eppendorf defined maintenance may be able to create a custom program at prevailing parts, labor, and travel rates.

> Bench Scale–Advanced Maintenance includes required annual service of the bearing housing assembly and Essential Check is not available for these products

Performance Plans Bench Scale	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)	IQ/OQ
BioFlo 115	0082140004	0082140005	0082140007		
BioFlo 120	0082140044	0082140045	0082140047	0082140048	0082140049
BioFlo 310	0082140084	0082140085			
BioFlo 320	0082140124	0082140125	0082140127	0082140128	0082140129
BioFlo 415	0082140164	0082140165	0082140167		
CelliGen BLU			0082140257	0082140258	0082140259

## Extended Warranty<sup>1,2</sup>

Description	Catalog No.
BioFlo 115	EXTW-115
BioFlo 120	EXTW-120
BioFlo 310	EXTW-310
BioFlo 320	EXTW-320
CelliGen BLU	EXTW-BLU

## Advantage OS

Description	Catalog No.
BioFlo 115	ADSERV-115
BioFlo 120	ADSERV-120
BioFlo 310	ADSERV-310
BioFlo 320	ADSERV-320
BioFlo 415	ADSERV-415

<sup>1</sup> Available only for systems utilizing a BioBLU single use vessel.

<sup>2</sup> If not purchased with the system or after the warranty period a qualifying Preventive Maintenance is required, additional exclusions apply.

# Bioprocess Pilot/Production Performance Plans

Performance Plans Pilot/Production Scale	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)	IQ/OQ
BioFlo/CelliGen 510	0082140293	0082140294	0082140295	0082140297	0082140298	0082140299
BioFlo 610	0082140333	0082140334	0082140335	0082140337	0082140338	0082140339
BioFlo Pro 60 L	0082140373	0082140374	0082140375	0081240377	0082140378	0082140379
BioFlo Pro 120–400 L	0082140463	0082140464	0082140465	0081240377	0082140378	0082140379
BioFlo Pro 800–2400 L	0082140593	0082140594	0082140595	0081240377	0082140378	0082140379
CelliGen Pro 60–240 L	0082140693	0082140694	0082140695	0082140417	0082140418	0082140419
CelliGen Pro 520 L	0082140643	0082140644	0082140645	0082140417	0082140418	0082140419

## Annual Preventive Maintenance (PM)

To ensure the performance of the Eppendorf Pilot and Production Scale systems annual maintenance is highly recommended. These services provide all labor, parts and documentation to complete a full maintenance service. Systems will be inspected, tested and or/adjusted according to specific protocols. All results will be documented and available for review in an electronic maintenance report. Additional parts required beyond the included PM parts kits to restore system performance, additional customer installed items, calibrations and travel are not included. Customers with needs or requirements outside of Eppendorf defined maintenance may be able to create a custom program at prevailing parts, labor and travel rates.

- > Pilot and Production Scale–Advanced Maintenance is recommended every other year and includes maintenance of the bearing housing assembly. On alternating years Essential Check service is recommended. Essential Check for Pilot and Production Scale Systems provides all the service of Advanced Maintenance but does not include service on the bearing housing assembly.
- > Premium and Advantage OS service plans include preventive maintenance which will alternate annually between Advanced Maintenance and Essential Check

## Advantage OS

Description	Catalog No.
BioFlo/CelliGen 510	ADSERV-510
BioFlo 610	ADSERV-610
BioFlo Pro 60 L	ADSERV-PRO60
BioFlo Pro 120–400 L	ADSERV-PRO120
BioFlo Pro 800–2400 L	ADVPRO800-2400L
CelliGen Pro 60–240 L	ADSERV-PROCG60120L
CelliGen Pro 520 L	ADSERV-PROCG520

# Bioprocess Pilot/Production Performance Plans

## Installation Assistance—Pilot and Production Scale Only

This on-site assembly assistance for one system will ensure proper assembly of the fermentation vessel, control cabinet and piping skid from shipping crates to its final location utilizing designated lifting points. We will manage the appointed rigging company personnel, and Electrical and Plumbing Contractors to assure the system is properly installed. Riggers, Electricians and Plumbers must be supplied by the end user. Installation Assistance and Installation Start-up Assistance are separate events.

### Installation Assistance

Description	Catalog No.
BioFlo/CelliGen 510	0082140309
BioFlo 610	0082140349
BioFlo Pro	0082140389
CelliGen Pro	0082140429

## Installation Start-up Assistance—Available for Bench, Pilot and Production Scale systems

This set up verification service for one system is performed by our Field Service Engineer to ensure the system is operating as designed and to perform basic instructional training. For Pilot and Production systems, Start-up Assistance requires the fermentor/bioreactor system has been erected and connected to all required utilities. Similarly for Bench Systems, proper bench space with required services must be available to complete the Start-up. Documentation for Installation Start-up Assistance is a check list and service report.

### Installation (Start-up Assistance)

Description	Catalog No.
BioFlo 115	0082140021
BioFlo 120	0082140061
BioFlo 320	0082140141
BioFlo 415	0082140181
BioFlo/CelliGen 510	0082140311
BioFlo 610	0082140351
BioFlo Pro 60 L	0082140391
CelliGen Pro 60 L	0082140431

### Certification Services (IQ/OQ)

BioCommand Batch Control Plus	Catalog No.
IQ	0082140847
OQ	0082140848
IQ/OQ	0082140849

## Site Acceptance Testing – Pilot and Production Scale Only

Site Acceptance Testing/Training—One day per system (Anything done regarding validated systems) includes labor and travel to customer's location by an Eppendorf qualified expert to conduct an inspection and re-verification of the system which is consistent with the FIT. SAT requires the fermentor/bioreactor system has been erected and connected to all required utilities. SAT does not replace Installation Assistance and assembly guidance is not covered. SAT is designed for customers who wish a more rigorous review than Installation (Start-up), but do not require an IQ/OQ level of documentation of regulated customers.

### Site Acceptance Testing and Training

Description	Catalog No.
BioFlo/CelliGen 510	0082140310
BioFlo 610	0082140350
BioFlo Pro 60L	0082140390
CelliGen Pro 60L	0082140430

## Factory Inspection Test (FIT)—Pilot/Production Scale only

Factory Inspection Test: One day per system (1 additional day for validation package review) Factory Inspection Test will be conducted at the Eppendorf facility in Enfield, CT. Factory Inspection Test allows a customer's appointed designee/expert to be on-site and inspect the system prior to shipping. The Eppendorf standard FIT includes a visual inspection/verification of each option purchased as well as a full piping and instrumentation (P&ID) review of the system including valves, pumps, heat exchangers, etc. In addition, the customer will receive a basic training on the control software for either the Eppendorf RPC or the Allen Bradley whichever one is installed on the customers system. Finally functional tests are included such as pressure hold testing, sterilization and cascading.

The Factory Inspection Test must be scheduled within 10 business days of the written notification that the system is ready for testing. After 10 business days, it will be concluded that the customer has declined the option to perform the Factory Inspection Test. The customer may choose to decline the Factory Inspection Test at any time by notifying Eppendorf's FIT scheduling representative or their Bioprocess Sales Engineer. The Factory Inspection Test must be completed within 30 days from the initial written notification, any exceptions to the above policy are subject to prior approval. Visitors will be responsible for all travel related expenses.

### Factory Inspection Test

Factory Inspection Test	Catalog No.
Factory Inspection Test	M1364-FIT

# Bioprocess Support Services

## Small Scale Services<sup>1</sup>

Installation and Commissioning	Catalog No.
<b>DASbox (DX) Systems</b>	
4xDX	76DXCOMQ4US
8xDX	76DXCOMQ8US
12xDX	76DXCOMQ12US
16xDX	76DXCOMQ16US
20xDX	76DXCOMQ20US
24xDX	76DXCOMQ24US
<b>Modular (DG) Systems</b>	
4xDG	76DGCOMQ4US
8xDG	76DGCOMQ8US
12xDG	76DGCOMQ12US
16xDG	76DGCOMQ16US

<sup>1</sup> Travel is included.

## Bench Scale Controller Training

Participants will receive an introduction to their specific benchtop bioreactor/fermentor purchased (120, 320, or 415) Customers can choose from on-site at their company location or Eppendorf lab in Enfield, CT. Training will include User Interface overview, operational modes and a typical system setup workflow based on prokaryote or eukaryote application. Hands on training will include vessel setup and preparation for inoculation, calibration, sampling, interfacing auxiliary equipment and cascade training. BioCommand (optional software if purchased) training includes review of the main screens, creating/executing/initiating/terminating and saving recipes and batches, construct a Synoptic screen and review the reporting tools for papers and presentations. Training is 1 day (8:30 am–5 pm with an hour break for lunch) for up to 4 people. There will be a pre consultation discussion at the time of scheduling to incorporate the participants application into the training. A detailed agenda will be provided prior to the training. All travel related expenses for trainer on-site or visitor travel to Enfield, CT will be the responsibility of the customer.

Bench Scale Controller Training <sup>2</sup>	Catalog No.
On-site training	TRAIN_ONSITE

<sup>2</sup> Travel is not included.

## Small Scale

Off-Gas Analyzer Maintenance Options	Catalog No.
GA4 Refurbishment of Sensor Trains (4x) O <sub>2</sub> 50%/CO <sub>2</sub> <sup>3</sup>	77105002
GA Refurbishment of Sensor Train (1x) O <sub>2</sub> 50%/CO <sub>2</sub> /Flow <sup>3</sup>	77105001
<b>System Reconfiguration</b>	
Database modification for Small-scale Configuration <sup>4</sup>	77105018
<b>Validation Systems</b>	
Validation Package DG xFold System <sup>5</sup>	76DGVAL
Validation package DG 4 more units (add quantity 1 for each additional 4 units) <sup>5</sup>	76DGVAL+4

<sup>3</sup> Plus Demand Labor and Travel.

<sup>4</sup> Includes CTPC number of system.

<sup>5</sup> These part numbers reflect the actual documentation supplied by the factory—additional labor to perform IQ/OQ must be included as Demand Labor.

## Small Scale System Training

Small Scale System Training	Catalog No.
Training at Customer Site (1 Day) <sup>6</sup>	76DGTRAINUS

<sup>6</sup> Travel not included if not part of the Installation and Commissioning.

## Consulting Services

Sr. Engineer Consulting service is available to support customers with exceptional or unique challenges that require solutions and or advanced troubleshooting, usually associated with complex and or customized systems. Access as determined by Area Service Manager is part of Premium Service agreements and is also offered here at a minimum 4 hours plus zone travel fee.

Consulting Services	Catalog No.
Consulting Services	CONSULTING

# Bioprocess Service and Support

## CEPA Continuous Flow Centrifuges

<b>Performance Plans CEPA Continuous Flow Centrifuges</b>	<b>ADVANCED MAINTENANCE</b>	<b>PREMIUM SERVICE</b>	<b>Advantage OS</b>	<b>Installation and Commissioning</b>
<b>CEPA G/LE</b>	PM-LE	PREMSERV-CEPA-LE	ADSERV-LE	901513620
<b>CEPA Z41/G</b>	PM-Z41	PREMSERV-CEPA-Z41	ADSERV-Z41	901513620
<b>CEPA Z61/G</b>	PM-Z61	PREMSERV-CEPA-Z61	ADSERV-Z61	901513620
<b>CEPA Z81/G</b>	PM-Z81	PREMSERV-CEPA-Z81	ADSERV-Z81	901513620
<b>CEPA Z101/G</b>	PM-Z101	PREM-CEPA-Z101G	ADSERV-Z101	901513620

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