

After Sales Services

FLSmidth Airloq offers you a wide range of after sales services on your gas analysis equipment in order for you to optimise plant performance and to help you save time on possible system failures. We offer service agreements including 24-hours hotline service, we repair 95% of all incoming analysers in our own service work shop, and our engineers are continuously trained in any new features within gas analysing technology.



After Sales Services

Customer Services

The FLSmidth Airloq service department handles all customer approaches after delivery of any new gas analysis products. The department is divided into 3 divisions - internal service, external service, and after sales service - which each handles different tasks. We aim to ensure maximum customer satisfaction and product efficiency by being a competent and serious sparring partner. We never give up on a service problem but solve it professionally in close co-operation with the customer. Our main objectives are:

Efficient Internal Service Procedures

The handling of repairs and claims is to be handled efficiently and professionally. The customers are to be continuously informed of the status of the handling, and the follow-up on our sub-suppliers must be continuous and efficient.

Repair Time

We continuously strive to improve our repair time on the instruments sent to us for repairs. The average repair time must be approximately 10 days and is to be monitored. We must always try to find ways to improve procedures and technical features.

Technical Know-How

At least 2 technicians are to be technically competent in repairing the various instruments in our product range.

Closeness to the Customer

We find it essential to be close to our customers and to be able to provide support quickly. Thus, we are working on building up local service centres to support you with wear and spare parts from day to day.

Varied Product Line

In order to deliver and service the products that our customers prefer, we will not be dependent on one single supplier. Our products must be innovative and up-to-date and they must comply with any new standards in the business.



Fig. 1 The FLSmidth Airloq Service Group in Denmark

Internal Service

Our in-house service workshop works daily with calibration, linearising functions and repairs on analysis instruments. Technical support by telephone, help to self-help and the handling of exchange of spare parts are also major functions in the department.

95% of all incoming analysers for repair are to be handled in the workshop without sending the instruments back to the sub-suppliers. Consequently, we are able to keep a repair time of approximately 10 days. We use certified test gases to test and calibrate all instruments. By the use of high precision mass flow controllers, we are able to generate the gas mixture required to test the complete range of any instrument. If required, we can do stress tests using a heating chamber to clarify that an instrument meets its specifications successfully. Furthermore, our workshop is equipped with special tools for the handling of electronic circuit boards.

When receiving the instruments for repair, we have procedures for informing the customers on the status of the repair. On the same day of receipt of the instrument, the customer is informed of the reception of the instrument, and the order is given an order number. Within 5 days, the customer is informed of the extent of the repair - prices, delivery time, fault findings, etc. Within 2 days after the acceptance from the customer on the repair conditions, the instrument is sent back to the plant.

External Service

Our external service engineers handle 24-hour hotline service, acute visits on site, commissioning of new installations, AST/QAL2 functional tests and preventive service visits. All service jobs are completed with a detailed service report which is given to the customer. In some cases, our service visits function as part of the customers' quality assurance system, and our service reports are used as documentary proof to the local authorities.



Fig. 2 Our internal service engineers provide you with technical support by telephone, and the engineers are continuously trained in any new technologies within the field of measurement of gases.

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Preventive maintenance on the gas analysis system is essential as more demanding standards on emission outlets have been passed, especially in Europe. The regular service checks will help you avoid annoying system breakdowns and assure a continuous and trouble-free production.

Service Visits

Special procedures have to be followed on the service visits in order to make sure that all essential system features have been checked and corrected. The procedures are as follows:

- Collection of data on system status
- Preventive maintenance exercise from specific service report according to the actual product/analysis system
- Acquisition of possible spare parts
- Approval from customer

Spare Parts

FLSmidth Airloq aims to stock all relevant spare parts necessary for maintenance of our customers' equipment. We continuously update our stock and are able to deliver original spares for many kinds of products. Wear parts and the most commonly used spare parts are all available from our central stocks in Denmark and the US. In this way, most spare parts can be sent to you from day to day. Moreover, we have the possibility of getting all spare parts that are not in our stock on a day-to-day basis.

However, we recommend that you stock some spare parts at your end for all equipment already at an early stage of any project. The presence of special spare parts during start up and commissioning is essential to ensure completion of the installation within the scheduled time. An adequate stock of spare parts is also essential in order to minimise annoying system shutdowns and subsequent production losses.

We can provide you with lists of adequate parts for your stock and undertake the task of advising original spare parts to meet with the system's exact specifications.

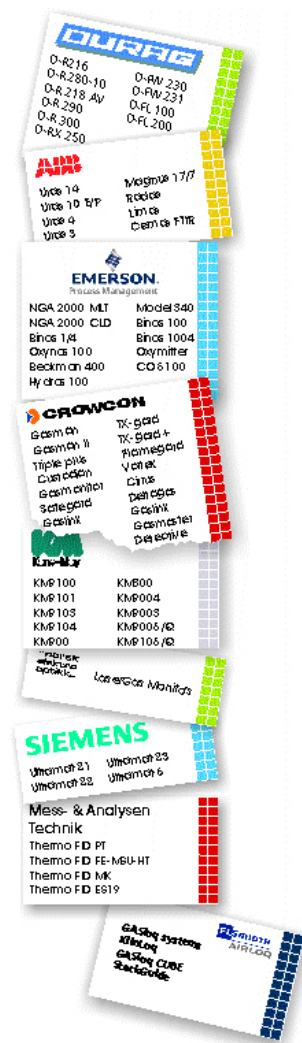


Fig. 3 Our varied sub-supplier programme is essential for servicing our customers properly

After Sales Service

After sales services handles spare parts, training courses, after sales orders, claims, service agreements, and co-ordination of service visits. It is most often the department taking care of any incoming telephone calls or e-mails, and any training programs are co-ordinated from this division.

Sub-suppliers

FLSmidth Airloq co-operates with many different sub-suppliers. We find it critical to be able to deliver the product the customer prefers and a varied and technologically innovative product line.

As the business of gas analysis equipment is very complex, it is essential that the persons dealing with repairs, delivery of spare parts and new products are confidential with the equipment. Thus, it is important to us that our engineers are always up-to-date on our products, and that they are in close contact with the sub-suppliers regularly.

The Service Contract

Signing a service contract with FLSmidth Airloq provides you with a safe and stable gas analysis system. Regular maintenance helps you reduce system downtime and optimise system and plant performance. The service agreement is signed in order to keep the gas analysis system in good working condition and to grant you a status of being a first priority customer.

The service contract can be signed either as a fixed price agreement or as an agreement based on time spent on the service job. The choice of service contract may depend on the type of gas analysis equipment, legal demands, or any demands from the customer on maintenance, quality assurance, etc.



Fig. 4 After the expiration of the system warranty period, the customer will take over the responsibility for servicing the gas analysis system.

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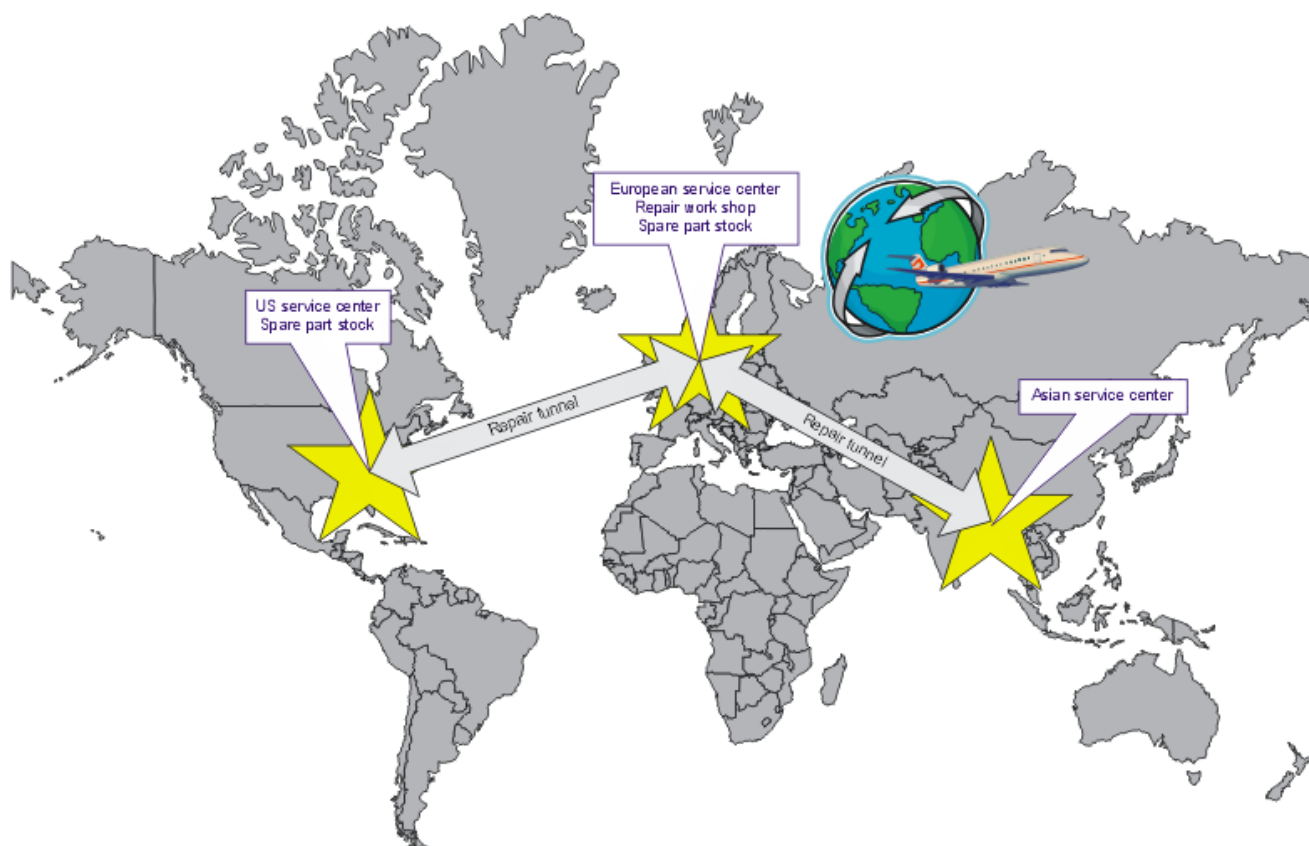


Fig. 5 The FLSmidth Airloq service departments around the world. Our main service centre is situated in Denmark, where the major part of our well-trained service engineers are stationed. They travel all over the world to support you on service visits, training of personnel and start-ups of new gas analysis systems. We are now building up service centers and spare parts stocks in the US and Asian regions in order for you to have spare parts from day-to-day. For the shipment of products to our workshop in Denmark we have established special "repair tunnels" so that any equipment for repair will be sent in the quickest and less expensive way.

Emission Monitoring and Quality Assurance

Interpretation and practical work with CEN standards is often a comprehensive and difficult task for many customers. FLSmidth Airloq has many years of experience in working with especially the new European Standards for Waste Incinerating Plants (En14181). It is a new way of handling emission monitoring equipment, and the golden thread in the directives and standards is quality assurance of the monitors in question. We can guide you on specifications of the equipment, commissioning of the equipment, and due to the very strict procedures during our service visits, we give you the possibility of using our service reports as part of your quality assurance system for reporting to the local authorities. Please contact us for more details on quality assurance and local standards.

24- Hour Hotline Service

You may also choose to sign a service agreement with a 24-hour hotline service in case of urgent problems. In this way, you will gain free access to our technical telephone hotline support which is open 24 hours a day, 7 days a week, all year round.

We guarantee a start up of remedial action within 2 hours from 7 service engineers who take part in the 24- hour hotline service. They have the possibility of logging onto your gas analysis system from the workshop at FLSmidth Airloq or via remote access from their home address. In case the situation cannot be solved by telephone or via remote control, our service engineers will come to your plant as quickly as possible.

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