argos F

INSTRUCTION MANUAL

Version 1.0 2025

1. Table of Contents

2. General user information

2.1 Purpose of the Instruction Manual

The instruction manual guides safe and effective Argos F device use, providing step-by-step instructions, safety assurance, and troubleshooting help. Designed for clarity, it empowers all users.

2.2 Intended use

Argos F device serves to fill volumetric flasks till upper mark point. It is intended to be used as a “semi-automatic" device. The volumetric flask is manually and carefully placed in flask holder. Filling process and filing results can be managed from device software.

2.3 General risks associated with improper usage

Using the instrument incorrectly can lead to harm to individuals, consequential damage to processes, and impairment of the instrument's functionality.
The manufacturer cannot provide assurance for the protection of individuals and the instrument in subsequent situations:

- Usage of the instrument outside the defined scope of application.
- Inaccurate instrument setup or improper transportation.
- Failure to follow the installation and operational instructions stated in the Instruction Manual.
- Unauthorized alterations made to the instrument.
- Operation of the instrument beyond specified limits

2.4 General Safety Precautions

- Store and transport the unit according to the guidelines outlined in the *Storage and Transportation* section.
- After storage or transportation, allow the unit to acclimate to room temperature for 2–3 hours before connecting it to an electrical circuit.
- Protect the unit from impacts, shocks, and falls.
- Use only original parts and accessories provided by the manufacturer specifically for this product.

- Do not modify or alter the unit's design in any way.
- Ensure that ventilation openings remain unobstructed at all times.
- Never operate the unit with its covers removed

2.5 Electrical Safety Precautions

- Connect the unit only to a power source with the voltage specified in the Technical Specifications section.
- Use a power line regulator if the local mains network experiences fluctuations exceeding 10% of the nominal values.
- Do not plug the unit into an ungrounded power socket or use an ungrounded extension cord.
- Ensure the power plug remains easily accessible during operation.
- Always disconnect the unit from the power source before moving it.
- After replacing fuses, double-check their placement to ensure proper installation.
- Do not operate the unit in environments where condensation may form. The unit's operating conditions are detailed in the Specifications section.

2.6 Biological and Chemical Safety Precautions

- Ventilation: If dangerous or flammable gases can be formed, ensure that the device is used in a well-ventilated area or, preferably, under a fume hood to prevent accumulation of hazardous fumes.
- Flammable Substances: Ensure proper precautions are in place when handling flammable substances. Use flame arrestors, spark-proof components, or explosion-proof equipment in areas where flammable vapors or gases may accumulate.
- Material Compatibility: Confirm that the wetted materials (specified in Specifications are chemically compatible with the substances being transferred to the volumetric flask. Check for signs of corrosion, degradation, or blockage in the pump or needle that might lead to hazardous chemical reactions.
- Decontamination Protocol: Establish a routine decontamination process (see Cleaning and Decontamination section). Use non-corrosive disinfectants or sanitizing agents compatible with the wetted materials.

- Contamination Risks: Consider risks of biological contamination if you're working with pathogens, cell cultures, or other biological materials.

Ensure you have thoroughly read and understood the Instruction Manual before using the Argos F device. Pay close attention to sections marked with a symbol (section 2.7 Meaning of the safety symbols).

2.7 Meaning of the safety symbols

All danger symbols used in this document are explained below:

	Risk of severe bodily injury or fatality due to electric shock. Not following this warning may result in electric shock and death.
	Risk of physical harm or health risks with prolonged impacts. Ignoring this caution could lead to injuries that have the potential for lasting health consequences.
	Explosion and Fire Hazard Never process explosive or highly flammable liquids
	Pinch point, Mechanical Hazards Automatically moving parts may cause injuries (crushing, piercing)

2.8 Meaning of the pictograms

All pictograms used in this document are explained below:

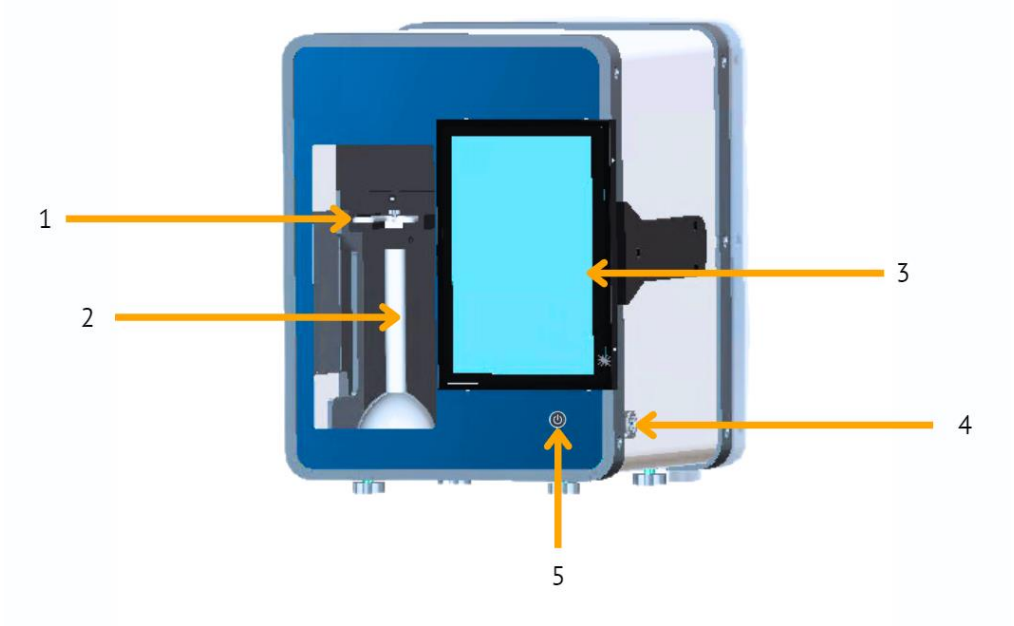
 Additional information about the current topic.

 Recommendations when working with the Argos F.

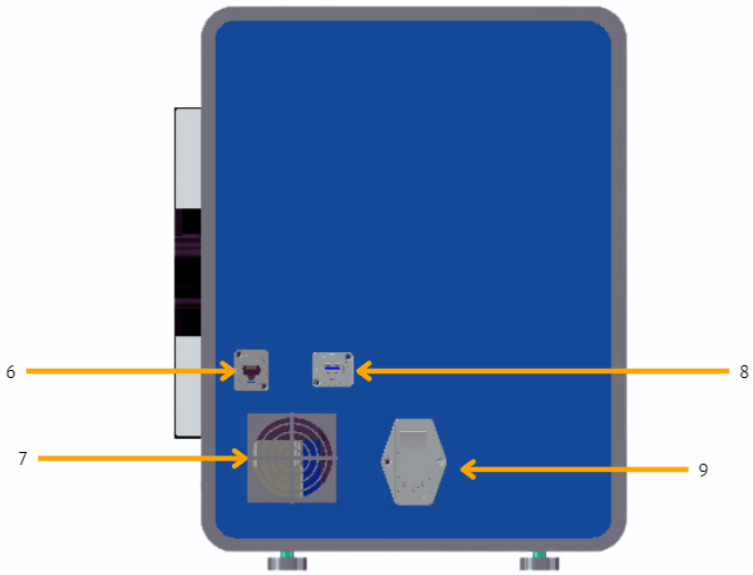
3. Instrument overview

3.1 Argos overview

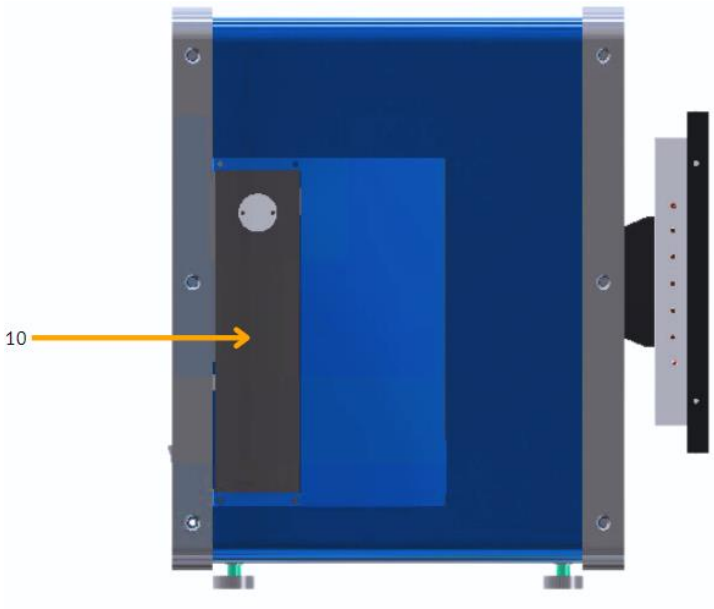
Front view



Rear view



Side (right) view



Nr.	Component name
1.	Flask holder
2.	Flask
3.	Monitor
4.	USB port (for data transfer)
5.	Turn on button
6.	Network port
7.	Ventilator
8.	USB port (for printer connection)
9.	AC coupler with power switch
10.	Pump

3.2 Specification

General	
Operating environment	Indoor use
Altitude	Up to 2000 m
Operating temperature	5- 50 °C
Operating and storage humidity	20 % - 80 %, relative, non-condensing
Wetted materials	PTFE, glass, PFA, stainless chromium nickel steel, polypropylene, ETFE, PEEK
Compatible with volumetric flasks	50, 100, 200 ml clear glass, NS 14/23, 10, 20, 25 ml, clear glass NS 10/19 (optionally)
Physical	
Device dimensions (WxDxH)	340 x 390 x 430 mm
Device weight	19.5 kg
Electrical	
Installation category	II
Power requirements	230 ± 10 % V~, 50 Hz, 0.5 A
Fuse rating	220 V, 2 A
User interfaces	
USB 3.0, USB 2.0	- Data transfer - Peripheral devices (incl. thermal transfer printer)
Ethernet (RJ-45)	- Server connection for data backup - Robotic arm connection (optional)
Display	10” capacitive touchscreen

Performance Specifications	
Pass rate*	99%
Deviation of mark from meniscus	Typically, less than +/- 100 µm**
Repeatability of filling (n=6; RSD)	Typically, less than 50 µm
Deviation of mark from meniscus detected as “Fail”	Less than 120 µm
Time to fill a set of 10 flasks	Typically, less than 5 minutes
Warning system	- Flask not installed in imaging system; - Liquid drops detected on the neck internal wall (due to surface or insufficient cleaning); - Precision pump wear monitoring; - Operation qualification data approaching.
* Pass rate – minimum number of successful fillings in a set of 100 flasks ** Volumetric flask mark thickness in average 400 µm *** Specifications are subject to change without notice	

4. Installation

4.1 Unpacking

Carefully remove the packing materials and keep them for future use in case the unit needs to be shipped or stored. Inspect the unit thoroughly for any damage that may have occurred during transit. Please note that the warranty does not cover transit-related damage and is valid only for units transported in their original packaging.

	- Due to the unit's heavy weight, unpacking and installation must be performed by two people.
	- Unpacking instructions are provided in the package with the device.

4.2 Package contents

- Argos F plug and play device with preinstalled pump and liquid tube connections
- Power cable
- Leveling tool (spirit level)
- Zebra ZD411t Thermal transfer printer (optional)
- Printer power cable and USB cable
- NS 14/23 flasks holder
- NS 10/19 flasks holder (optional)
- 100 ml volumetric flask (for Performance checks)
- USB Flash drive for data export
- Network cable

4.3 Installation Steps:

1. Select a Suitable Location:

   Choose a clean, well-lit, and stable surface for placing the Argos F.

   Ensure that the area is free from obstructions and has access to a power source.

   The device should be placed in a location that is at least 45 cm wide (plus additional space if a printer is included), 50 cm deep (ensuring at least 10 cm of clearance from the wall for ventilation), and 430 cm high to accommodate proper positioning.

2. Unpack and Inspect:
   Carefully unpack the automatic flask filler and inspect it for any shipping damage. If you notice any issues, contact the manufacturer's customer support.
3. Position the Filler:
   Place the Argos F on a stable surface, ensuring that there is enough space on the left side (where the pump is located) to position the solvent bottle and to observe the pump for any potential leaks.

4. Leveling:
   Proper leveling is essential for accurate and consistent filling.
   Follow these steps to level the automatic flask filler:
   a. Place a leveling tool (spirit level) on the flask holder.
   b. Check the bubble in the spirit level. If it's not centered, the filler is not level.
   c. Adjust the leveling legs on the bottom of the device until the bubble is centered.
   d. Rotate the spirit level by 90 degrees to check the level in the second direction.
   e. If needed, adjust the leveling legs until the bubble is centered in both directions.
5. Connect Power:

Plug the Argos F power cord into the socket located on the rear side of the device. Connect the other end to a grounded power socket or a grounded extension lead

Power cord should meet at least HO5VV-F, 3G x 0.75 mm² criteria if not original used.

Ensure that the power supply voltage is 230V, with fluctuations not exceeding ±10% to maintain safe operation.

	Failure to comply with these requirements may result in damage to the device or electrical hazards.

The device is now ready for the next steps.

6. Disconnect Power (When Moving or Not Using for Prolonged Period)

To safely disconnect the Argos F from the power supply, follow these steps:

1. **Power Down the Device (if in operation mode):** Press the power button on the upper right side of the monitor to initiate shutdown and wait for 10 seconds.

2. **Power Down via Rear Panel:** Press the click button on the power coupler located on the rear panel to disconnect the device from the power supply.
3. **Disconnect from the Enclosure Connector:** Unplug the power cord from the mains input connector on the device's rear side.
4. **Isolate from Mains Supply:** If required, unplug the power cord from the mains socket.
5. **Verify Disconnection:** Ensure the device is fully powered down before handling or moving it. Always handle the power cable carefully to avoid damage or electrical hazards.

	Emergency Disconnection: In case of an emergency, press the click button on the rear power coupler or use the fastest available disconnection method.

4.4 Connecting USB devices

The Argos F device has two USB ports (type A socket) for printer connection and for USB flash drive connection.

Printers connected to USB should be following models:

- Zebra ZD411t Thermal transfer printer

- Any thermal transfer printer on request (contact support team)

4.5 Connecting device to the network

Argos F has a network connection (Ethernet). This can be used to save Audit trial, Result history, Service data on server.

To synchronize data with your server, read Synchronization with Server section

5. Operation

5.1 Switching the instrument on and off

Proceed as follows:

1. Press the power switch on the right-hand side of rear panel of Argos F;
2. Then press the power button on the front panel of device;
3. The blue led on button should light up;
4. Wait for several seconds for the device to turn on.

*See Instrument overview for reference

	Make sure that the device is empty (no flasks/beaker or any other equipment inside).(If flask stuck inside, press power button and wait till syringe goes upwards, remove flask from the device)

To safely turn off the Argos F:

1. Power Down the Device (if in operation mode): Press the power button on the upper right side of the monitor to initiate shutdown and wait for 10 seconds (till click)
2. Power Down via Rear Panel: Press the click button on the power coupler located on the rear panel to disconnect the device from the power supply.
3. Disconnect from the Enclosure Connector: If the device will not be used for several days or if voltage fluctuations are expected, unplug the power cord from the mains input connector on the rear side.
4. Isolate from Mains Supply: If necessary, unplug the power cord from the mains socket to ensure complete isolation.

5.2 Fundamentals of operation

Touch-sensitive screen

Monitor of Argos F device is touch sensitive. You can touch the screen with the finger, the eraser of a pencil or a stylus (special tool for operating touch sensitive screens).

Never touch the touchscreens with a pointed or sharp object such as ballpoint pen.

5.3 Rights and permissions

	Admin	User
Flask filling	+	+
Result review	+	+
Result export	+	+
User management	+	
Delete results	+	
Execute performance check	+	
Change Settings	+	

5.4 First start-up

The initial startup process differs slightly from subsequent start-ups. During the first startup, the administrator must set a password and ensure it is securely remembered. If the admin password is lost and there are no other administrator accounts, please contact our support team for assistance.

Steps	Additional Info
1. Power On the Device	- Press the power button on the right-hand side of the rear panel. - Then press the power button on the front panel. - The LED button lights up in blue. Wait a few seconds until the welcome screen appears.
2. Login Screen	- The Login screen will appear.
3. Enter Username	- In the "Username" field, enter "admin" and press the “Login” button.
4. Set New Password	- The “Set new password” window will appear. - Set your own password and press “Ok”.
5. Main Menu	- The “Main Menu” window will appear.

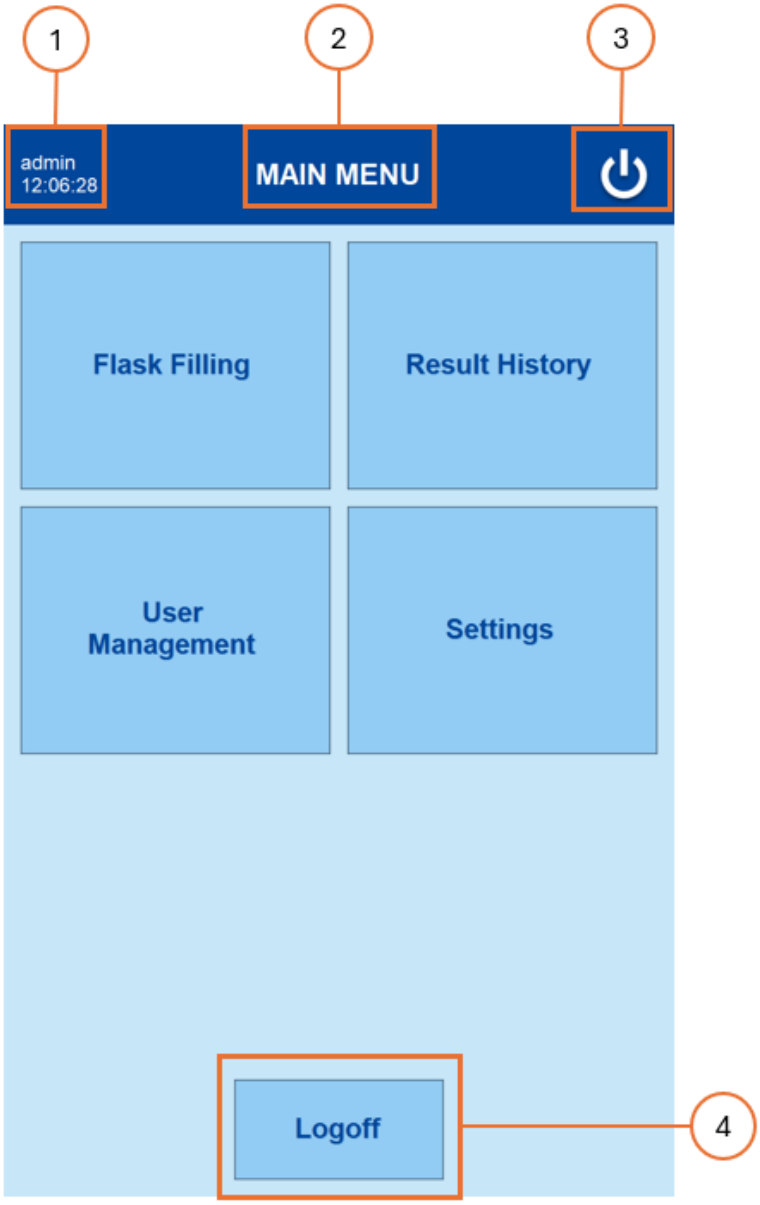
6. Qualification Procedure (Optional)	- To ensure the device operates correctly, please carry out a qualification procedure.

Additional Notes:

	- Qualification Procedure **is optional but recommended for device performance verification.**

5.5 Display elements

Admin main menu window overview



1	Username or name and surname of operator and time
2	Window name
3	Turn off device button
4	Logoff button (leads to LOGIN screen)

The Admin MAIN MENU window includes the following buttons: “Flask Filling,” “Result History,” “User Management,” and “Settings.” Each action is described in its respective section.

Non-admin users have access only to the “Flask Filling” and “Result History” buttons.

5.6 Flask filling operation

Step	Operator Action	System Action
1. Access Flask Filling	- From the “MAIN MENU,” click the **Flask Filling** button.	- The **Initialization Page** will appear. *Note: If the pump has already been initialized (initialization happens once after turning on system), the system will skip to Step 4.*
2. Prepare for Initialization	- Insert a **400 ml beaker** on the waste platform. - Remove hands from the device.	- None (This step is preparatory).
3. Initialize the Pump	- Click the **Initialize** button. - Ensure no obstacles beneath the pump.	- The pump will move the plunger.
4. Purge the System (if necessary)	- On the **Purge Page**, choose whether to purge or not. - Purge if: - The solvent bottle has been changed. - The solvent hasn’t been used in 30 minutes. If the solvent was used shortly before, skip purging and proceed to Step 5.	- None (System waits for operator input on purging).
5. Install Components	- If the **beaker** is not on the waste platform, place it there.	- None (Setup step).

	- Install the **solvent bottle** - Choose how many times to purge. We recommend reviewing our Cleaning and Decontamination section	
6. Verify Solvent Volume	- Ensure there is enough solvent for flask filling.	- None (Verification only).
7. Purge the System	- Press the **Purge** button to start purging. - Press the **Stop** button to halt the process *if necessary*.	- The system will fill and empty the pump syringe the selected number of times. - While purging, the system will display a page with a **Stop** button.
8. Complete Purging (or Skip if Not Needed)	- After purging is complete (or skipped), proceed to the **Fill Setup Page**. - Remove beaker from the device (if installed)	- The system will show the **Fill Setup Page**.
9. Enter Filling Data	- Click **Add** next to the **Filling Data** section. - Fill in the required fields: • **Method Name** • **Batch** • **Flask Volume** - Press **Save** after completing the fields.	- The system will record the data in the **Result History**.

Description of Fields (Filling Data)

- Method Name**: Internal Method identification.**
- Batch**: Internal designation of flask series**
- Flask Volume**: Required to ensure accurate flask filling.**
- Expires In**: Expiration period of prepared solution (1 day by default)**

11. Add Comments (Optional)	- Click **Add** next to the **Comments** section. - Enter comments (e.g., "Last sample" or "Last series of samples"). - Press **Save** to confirm.	- None (Optional).
Comments can be added to any volumetric flask in the batch.		
12. Add Replicant Count (Optional)	- Click the field next to **Replicas** to specify replicant count, if needed.	- None (Optional).
13. Mark Flask as Prefilled	- Select the checkbox labeled **Flask is prefilled**. Ensure flask is prefilled according to the provided image.	- None.
14. Enable Label Printing (Optional)	- Check the **Result Labels** box if you wish to print labels after filling.	- Label printing is enabled if a printer is connected to the system and turned on.
15. Insert Flask into Holder	- Carefully insert the flask into the holder by holding it at the bottom. Wait till the volumetric flask stops moving in the holder.	- None (This step is preparatory).
16. Start the Flask Filling Process	- Click the **Fill** button to begin the filling process.	- The device will move the needle downwards and start filling the flask. - The **Filling Process** screen will appear.
17. Wait for Filling Process to Complete	- Allow the filling process to finish. - Press the **Stop** button (if needed) to halt the process.	- If the **Stop** button is pressed, the result will be marked as failed, and

		the process cannot be retried.
18. Verify the Filling Information	- Verify the filling information and remove the filled flask from the holder. - Optionally, attach a label to the flask.	- None (Verification step).
19. Finish or Continue Filling	- Click **Finish Filling Set** if done. - Click **Continue Filling Set** if you want to fill the next flask in the series. - Click **Start New Filling Set** if you need to fill with the same solvent but new filling information.	- The system will process your selection accordingly.

Additional Notes:

	Important: Ensure no obstacles are present around the needle or pump during the process to avoid damage.
	Always keep your hands and any objects away from the device while it is in operation, especially during filling.

5.7 Result review and export

1.1.1 Result review

Step	Operator Action	System Action
1. Access Results	- Navigate to Main Menu → Results → Result History.	- The system will navigate to the **Result History** page.
2. Select Date, Method, and Batch	- Choose the date when the filling took place. - Select the relevant Method and batch for the filling.	- The system will filter the results based on the selected date, Method, and batch.
3. Review Results	- Click the **Review** button.	- The system will display a table with the main information about the filling.

4. View Detailed Information	- To view detailed filling information, click the button with three dots (•••) on the right side of the table.	- A detailed view of the selected filling will open, showing all available information.
5. Navigate Between Fillings	- From the detailed view, use the navigation options under the image to scroll to the next or previous fillings.	- The system will display the next or previous filling record as requested.

1.1.2 Result export

Step	Operator Action	System Action
1. Access Results	- Navigate to Main Menu → Results → Result Export	- The system will navigate to the **Results Export** page.
2. Select Time Period for Export	- Choose the period when at least one set from the Method of interest was conducted.	- Once dates are selected, all Methods that occurred within this period will be displayed.
3. Select Methods for Export	- Select the Methods you want to export from the list of displayed Methods.	- The system will update with the selected Methods.
4. Insert USB Drive	- Insert a USB flash drive into the device.	- None
5. Export Selected Batches or Export Entire Method	- Select separate batches of Method or select checkbox for exporting entire Method	- None
6. Export Results	- Press the **Export** button to begin exporting the selected batches or Method.	- The system will export all sets from the selected batches or entire Method.

Additional Notes:

	Optional Data: If needed, the export can include CSV files and images in addition to the standard export data.

1.1.3 Delete results (Only for Admin)

Step	Operator Action	System Action
1. Access Delete Results	- Navigate to Main Menu → Results → Delete Results	- The system will navigate to the **Delete results** page
2. Select Date Period for Deletion	- Choose the date period when the filling Method took place.	- The system will display the names of all Methods found within the selected date range in the left pane.
3. Select Methods to Delete	- In the left pane, select the desired Method(s) for deletion.	- The system will display the selected Method(s) in the right pane, along with all corresponding batches found within the selected date range.
4. Show All Method Fillings (Optional)	- If you want to display all batches under the selected Methods, check the option **Show all Method fillings**.	- The system will display all batches related to the selected Method(s) in the right pane (doesn't matter which date were chosen)
5. Select Batches or Methods for Deletion	- Select the Method(s) or individual batch(es) under each Method that you wish to delete.	- The system will highlight the selected Method(s) or batch(es) for deletion.
6. Delete Selected Batches or Methods	- Click the **Delete** button.	- The system will prompt for the administrator's password in a pop-up window.
7. Enter Administrator Password	- Enter your **administrator's password** to confirm the deletion.	- The system will proceed with the deletion of the selected Methods or batches.

Additional Notes:

	**Deleting a Method or batch is irreversible**, ensure the correct items are selected before proceeding.

5.8 User management (Only for Admin)

1.1.4 Add user

Step	Operator Action	System Action
1. Access User Management	- Navigate to Main Menu → User Management → Add User	The system will show the **Add User** page.
2. Add a New User	- Click the **"Add User"** button.	The system will show the **Add User** page.
3. Fill in User Details	- Fill in the following fields: - **Username** - Name, Surname (Optionally) - **"Set new password after next login"** field is checked by default, meaning the user will need to set a new password after the first login. - Indicate whether the user should have **Admin rights**. - Set **time until logoff**. - Set **password expiration time**.	- The system will save the details entered for the new user.
4. User Successfully Added	- Once all fields are filled, press the **Save** button (implied). - Enter your **administrator password** to confirm addition of user.	- The user has been successfully added to the system.

Additional Notes:

	Admin Rights**: Make sure to grant** Admin rights **only to authorized users, as this will allow them full control over the system.**

1.1.5 Edit existing user

Step	Operator Action	System Action
1. Access User Management	- Navigate to Main Menu → User Management → Edit User	The system will display the **Edit User** page.
2. Edit User	- Click the **"Edit User"** button.	The system will show the **Edit User** page.
3. Select User to Edit	- From the dropdown list, select the **username** whose parameters you want to edit.	The system will display the details of the selected user.
4. Edit User Details	- You can make changes to the following fields: - **Username** (if needed) - **Operator's Name** (if needed) - **Logoff Time** (adjust if necessary) - **Password Expiration Time** (adjust if needed) - **Admin Rights** (check or uncheck as appropriate) - **Reset Password** (if the user has forgotten it)	The system will apply the changes to the selected user.
5. User Successfully Edited	- Once all changes are made, press the **Save** button (implied). - Enter your **administrator's password** to confirm editing	The system will confirm that the user has been successfully edited.

Additional Notes:

	- Admin Rights: Ensure that only authorized users have Admin rights, as it grants full system access. - Password Reset: If you reset the password, ensure the user is notified.

5.9.3 Delete user

Here's the table with the instructions organized for deleting a user:

Step	Operator Action	System Action
1. Access Delete User page	- Navigate to Main Menu → User Management → Delete User	The system will display the **Delete Management** page.
2. Select User to Delete	- From the dropdown list, select the **user** you want to delete. - Press the **Delete** button.	The system will confirm the user selection for deletion.
3. User Successfully Deleted	- Once the delete action is confirmed. - Enter your **administrator's password** to confirm deletion.	The system will confirm that the user has been successfully deleted.

Additional Notes:

	Deletion: Deleting a user is irreversible. Ensure that the correct user is selected before proceeding.

5.9 Settings (Only for Admin)

1.1.6 Argos F Performance Qualification tests

Steps	Operator Action	System Action
1. Select Performance Check type	- Navigate to Main Menu → Settings → Performance check tests→ Pass Rate or Over/Underfill test.	The system will display the corresponding qualification tests type.

2. Prepare device for performance check	- Install solvent bottle with deionized water (see section Solvents) - Prepare 400 ml beaker for Initialization and Purge - Prepare 100 ml flask (use the one that was supplied with the device)  - Flask should be clean and without scratches	- Preparation step
2. Initialize the Pump	- If the device is not initialized, the system process to initialization page. - Insert a **400 ml beaker** on the waste platform. - Remove hands from the device. - Click the **Initialize** button. - Ensure no obstacles beneath the pump.	- The pump will move the plunger.
3. Purge the System	- On the **Purge Page** - If the device is being used for the first time, proceed with one of the weekly maintenance cleaning procedures. - If the device was used less than a week ago and left with 10%-20% organic solvent, proceed with **three purges**. - Before purge insert a **400 ml beaker** on the waste platform.	- None (System waits for operator input on purging).

5. Qualification Process	- Qualification will proceed like a regular filling process. - Prompts on the screen will lead you through the qualification process.	The system will count the number of properly filled flasks (100 ml with any label). - **For Pass Rate performance check**: 100 **Pass** flasks (properly filled). **For Over/Underfill performance check**: 5 overfills and 5 underfills
6. Performance Check Completion	- If the conditions are met (100 Pass Rate or 10 over/underfills), qualification will end successfully.	If any condition fails, qualification will immediately stop, and it cannot be resumed.
7. Retry Options	- Retry qualifications under the following conditions: a) Flask is not vertical enough. b) The mark is miscalibrated. c) The mark is not found. d) The edges of the flask are not detected. e) The meniscus is too close to the mark. f) The operator pressed the **Stop** button.	The system will allow us to retry if one of the specified conditions is met.

Additional Notes:

	Qualification Flask**: You need a** 100 ml flask **of any label for the qualification process (Preferably use one which was supplied with the device).**

	Qualification Failure**: Qualification will end immediately if flask is filled not in accordance with performance check requirements.**

1.1.7 Argos F performance qualification tests export

Steps	Operator Action	System Action
1. Select Performance Check for Export	- Navigate to Main Menu → Settings → Qualification → Qualification Export	The system will display available performance checks for export.
2. Select Export Options	- Choose whether to include **CSV** files and/or **Photos** in the export.	The system will prepare the export based on selected options.
3. Insert USB Drive	- Insert a USB flash drive into the device.	The system will recognize the USB drive for exporting the data.
4. Export Qualification Data	- Press the **Export** button.	The system will export the selected qualification data (CSV and/or Photos) to the USB drive.

Additional Notes:

	- Ensure that the USB drive has enough available space for the exported files. - The export will include data from the selected qualification process based on your chosen options (CSV and/or Photos).

5.10 Audit trail

Steps	Operator Action	System Action
1. View Audit Records	- Navigate to Main Menu → Settings → Audit Trail	The system will show audit data for the current day.

2. Change Day	- To change the day, click the next or previous button under the table.	The system will display the audit records for the selected day.
3. Change Month	- To select a different month, click the **calendar icon**.	The system will allow you to choose a different month.
4. Filter Audit Data	- Under the **month selection field**, choose the column to filter the audit data. - Enter a **keyword** or part of a word (**case-insensitive**).	The system will filter the data based on the selected criteria for the chosen day.
5. Save Audit Data to USB	- Insert a **USB flash drive** into the device. - Press the Export button.	Wait for a notification confirming the **completion** of the copying process.
6. Exported Audit Data Format	- The audit data will be saved to the USB drive as **txt files** with names such as **"2025_12.txt"** (e.g., December 2025). - The structure of the data will be: **20.12 12:25:45;username;activity**.	- The system will export the data in the specified format.

Additional Notes:

	- Audit Data**: The exported audit data will be in a structured** txt format **on the USB drive.**

5.11 Synchronization with Server

Steps	**System Action**
1. Navigate to Settings → Server Synchronization	The system opens the **Server Synchronization** page.

2. Enter the **Server Address** (e.g., \\172.68.232.104\Path\To\Shared\Folder)	The system accepts the entered server address for synchronization.
3. Enter Login Credentials (if required)	The system stores the provided username and password **for accessing the server.**
4. Enable Server Synchronization	The system initiates copying of **Filling Results, Qualification Data, and Audit Logs** to the server.
5. Select Files for Synchronization	By default, ARGOS copies PDF reports and **.CSV** files for the **LIMS** system.
Additionally, the operator can enable: - **Copying of Images** from filling results. - **Secured Copying**: Files will be stored in .7z archives with password protection. **Password:** Arg0s *(with zero instead of "o")*.	

Additional Notes:

	- Each time a user logs in, ARGOS verifies that all previously copied files are present on the server. If any file is missing, ARGOS restores it (note: this does not apply to the file's internal content). ARGOS cannot copy data from the server back into its memory. - If an error occurs during the copying process, the system notifies every logged-in user immediately.

5.12 Service (Admin only)

Steps	**System Action**
1. Navigate to Main Menu → Settings → Service	The system displays the Service page.
2. View Audit Records	The system shows audit records related to the service.

3. Set Qualification Date	The admin user can press Set, select the date from the calendar when the qualification was performed. The selected date will appear in the Filling Results.
4. Set Qualification Validity	The admin can define the qualification validity based on the laboratory's internal rules. The system updates the set validity period.
5. Check & Manage Syringe Aspiration Count	Displays the aspiration count.
- Set Limit: A new limit can be set using the Set button (recommended if harsh or high-contaminant solvents are used).	
- Reset Counter: The count can be reset to zero using the Reset button	
6. View Service History	By pressing the History button, a log of all service-related actions is displayed.
7. Export Log & Add Comments	The service log can be downloaded using the Export button. Additional comments can also be added to the log.
1. Navigate to Main Menu → Settings → Service	The system displays the Service page.
2. View Audit Records	The system shows audit records related to the service.

6. Solvents

6.1Solvent compatibility

In Specifications is shown a list of wetted materials.

Please check the compatibility of your specific solvent with each wetted material.

PTFE (Polytetrafluoroethylene), glass, PFA (Perfluoroalkoxy), stainless chromium nickel steel, polypropylene, ETFE (Ethylene Tetrafluoroethylene), PEEK (Polyether Ether Ketone).

Some materials can be exchanged for your specific application.
Contact us for more information.

6.2 Change the solvent procedure

1. Ensure that the pump is not in the operation mode.

Pump plunger is not moving.

2. Perform a Cleaning Step

Weekly or daily cleaning depends on which solvent was used and how many days cleaning was not performed.

3. Carefully remove the tubing from the old solvent bottle.

4. Fill a clean solvent bottle with your new solvent

5. Insert the Tubing:

Insert the tubing which comes out of pump valve “In port” (see picture 6.2.1) into the new solvent bottle so that the tubing’s tip reaches the bottom. This ensures continuous solvent uptake and minimizes the chance of drawing air.

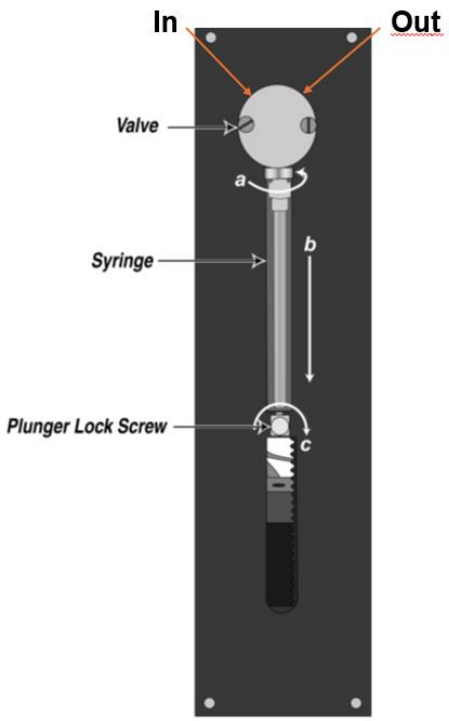


Figure 6.2.1 Embedded pump details

6. Purge the System:

Run the pump's priming routine (see Flask filling procedure) to fill the tubing completely with the new solvent. Check for any trapped air and confirm that the new solvent is flowing smoothly.

7. Volumetric flask compatibility

7.1 Compatible flasks

Argos F can be used with:

- 50, 100, 200 ml clear glass, NS 14/23,

- 10, 20, 25 ml, clear glass NS 10/19 (optionally)

For flasks with neck type NS 14/23 use flask holder marked 14/23

For flasks with neck type NS10/19 use flask holder marked 10/19

To change the flask holder, simply remove the flask holder (white part) (see image 7.1.1) and replace it with the corresponding holder.

Figure 7.1.1 Argos F device flask holder placement

7.2 Requirements for volumetric flasks

- The volumetric flask should be clean (no drops should remain on the flask walls).
- The flask should be free of scratches, as these can cause solvent drops to cling to the walls and device will detect scratches as liquid drops.
- The flask should have a clearly visible, uninterrupted calibration mark.
- **Argos F** can be used with flasks that have only one calibration mark.
- **Avoid using damaged or worn flasks**: Even minor imperfections can affect precision.

8. Cleaning and decontamination

8.1 Daily maintenance:

Procedure Execution: The operator must proceed to the flask filling step and then to the purge window to complete the process.

- Water Purging: Perform at least three purges with deionized water to remove residual substances.
- Organic Purging: Conduct at least three purges using a 10–20% methanol or ethanol solution for thorough decontamination.
- Final Conditioning: After purging, the system should be left filled with 10% methanol or ethanol to maintain cleanliness and prevent contamination.
- **Salt Buffer Use**: If a salt buffer is to be used after cleaning, perform an additional three purges with deionized water. This step is necessary to prevent precipitation that may occur due to the interaction between methanol/ethanol and the salt solution.

8.2 Weekly maintenance

The fluid path of the filling system must be cleaned weekly to remove precipitates such as salts, eliminating bacterial growth, and so on. Any of the three following cleaning procedures can be used:

- Weak detergent
- Weak acid and base
- 10% bleach

The procedures using these solutions are described below:

Weak Detergent Cleaning

To clean the pump with weak detergent, follow these steps:

- Prime the pump with a weak detergent solution (e.g., 0.5% Solujet® by Alconox Inc.) and allow the solution to remain in the pump with the syringe fully lowered for 30 minutes.
- After the 30-minute period, remove the reagent tubing from the detergent and cycle all the fluid from the syringe and tubing into a waste container.
- Prime the pump a minimum of 10 cycles with distilled or de-ionized water.

Leave the fluid pathways filled for storage.

Note: *CONTRAD® 100 can be purchased from us (Contact) or directly through Fisher Scientific. Order catalog number 04-355-27 for a 1 gallon container.*

Weak Acid-Base-Sequence Cleaning

To clean the pump with weak acid and base, follow these steps:

- Prime the pump with 0.1 N NaOH and allow the solution to remain in the pump(s) for 10 minutes with the syringes fully lowered.
- Flush the pump with distilled or de-ionized water.
- Prime the pump with 0.1 N HCl, and allow the solution to remain in the pump for 10 minutes with the syringes fully lowered.
- After a 10-minute period, remove the reagent tubing from 0.1 N HCl solution and cycle all the fluid from the syringes and tubing into a waste container.
- Prime the pump a minimum of 10 cycles with distilled or de-ionized water.

10% Bleach Cleaning

To clean the pump with 10% bleach, follow these steps:

- Make a solution of 10% bleach by adding one part of commercial bleach to nine parts of water.
- Prime the pump with the 10% bleach and allow the solution to remain in the pump with the syringes fully lowered for 30 minutes.
- After the 30-minute period, remove the reagent tubing from 10% bleach solution and cycle all the fluid from the syringes and tubing into a waste container.
- Prime the pump a minimum of 10 cycles with distilled or de-ionized water.

9. Maintenance

Tubing, syringe seals, and valves require periodic maintenance. If they become worn, you are likely to notice these symptoms:

Poor qualification test Pass rate (with clean/unscratched flasks)

If the qualification test fails, replace input and output tubing

The frequency of replacement will depend on the duty cycle, fluids used, and instrument maintenance.

Replacing Dispense or Reagent Tubing

To replace the dispense or reagent tubing, follow these steps:

1. Unscrew the fitting by hand to remove the existing tubing along with the ferrule.
2. Cut a new piece of tubing approximately 0.5 meters in length. Ensure the tubing can easily reach the bottom of any solvent bottle used with the device.
3. To install the new tubing, insert the fitting into the tubing and place the ferrule at the tip (see Figure 9.1.1). Insert the tubing with the ferrule into the valve and tighten it finger-tight.

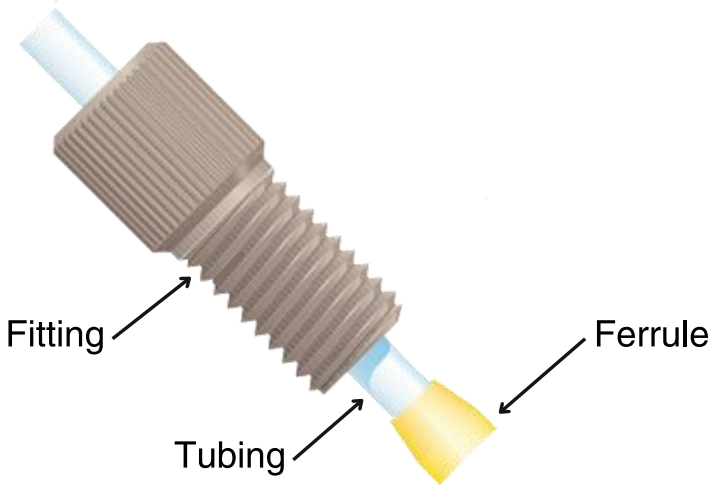


Figure 9.1.1. Tubing, fitting, ferrule configuration

If tubing replacement doesn’t help, contact us for technical support.

10. Troubleshooting

10.1 Flask filling process

Error/Prompt	Error Designation	Operator action
Flask borders are not fully vertical		1. Ensure the volumetric flask is stable in the holder. 2. Level the device according to the installation instructions.
Flask borders not found!	System doesn't detect flask.	1. Ensure flask is inserted.
Flask mark is not found!	Flask calibration mark is not detected.	Retry the process. If the issue persists, replace the flask.
Calculation error (possible airgap in the system)!	The device cannot complete flask filling.	Ensure there is enough solvent and that no air bubbles are present in the system.
Meniscus is too close to the Mark!	The device detected that the liquid level is too near the mark.	Fill the flask manually. In the future, avoid overfilling—always leave at least 1 cm of space between the liquid level and the calibration mark.
Calculation Error (possible flask movement)!	Device encountered unexpected mark or meniscus shift.	Ensure that flask is not moving during filling.
Check if flask is prefilled!	Checkbox “Flask is prefilled” is not selected.	1. Check flask is prefilled and select checkbox “Flask is prefilled”
No connection to the printer!	System cannot find printer connection to the device.	1. Check printer USB is connected to the device;

		2. Check if the printer is turned on.
Add set info!	System cannot fill flask without required fields filled.	Please fill required fields in “Set Info”.
Warning: Low Disk space – x% left!	Low disk space!	Delete old results. Section …
Dust detected on camera lens!	Dust or any other obstacles detected	

10.2 System Update Errors

Error/Prompt	Error Designation	Operator action
No update packages found!	The update package is not found.	Ensure that update package is located in the root directory of the flash drive.

10.3 User Management Errors

Error/Prompt	Error Designation	Operator action
User data is corrupted! Please refer to administrator!	User data lacks information, hence, data is corrupted	Delete corrupted user and create new one.
You can’t edit user with critically corrupted data!	User data lacks information, hence, data is corrupted	Delete corrupted user and create new one.
User has been blocked!	User has entered password incorrectly for 5 times	Reset user password.
User Management system error!	ARGOS F is unable to access internal user records.	Contact us

10.4 Device connection problems

Error/Prompt	Error Designation	Operator action
Pump is not connected!	System doesn't detect pump connection.	Restart the device.
Camera is not connected!	System doesn't detect camera connection	Restart the device.
The camera drive is not connected!	System doesn't detect drive connection	Restart the device.
Pump error!	Pump returned error state.	Restart the device.
Camera drive error!	Camera drive returned error state or lost communication during operation.	Restart the device. If the issue persists - possible cable damage.

10.5 Service-Related Problems

Error/Prompt	Error Designation	Operator action
Pump service soon!	Pump left less than 5000 aspirations.	See section Maintenance
Pump needs service!	Pump needs service immediately.	See section Maintenance
Device service soon!	Pump needs service in less than 14 days.	Contact us
Device needs service!	Pump needs service immediately.	Contact us

If you continue to experience issues or need further assistance, please contact us.

11. Disposal

Properly dispose of chemicals and of the product to reduce negative effects on the environment and public health. Local authorities, waste disposal companies or dealers provide more detailed information on disposal.

Observe the WEEE EU directive (WEEE = Waste Electrical and Electronic Equipment) or the proper disposal of waste electronic equipment within the European Union.

12. Contact details

If you have any questions, contact our SIA Faneks support team.

E-mail: argos@faneks.lv

Address: Braslas street 29A-210, LV1064, Riga, Latvia

Instruction manual online (check latest version):