# Functional Release Notes

## Version 5.11.6

*Release Information*

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# Content

# 1 General

FORCAM provides companies with all the information they need to control and optimize their production. The modular IIoT solution FORCAM FORCE™ is as flexible as the needs of customers. With a variety of production apps, FORCAM helps companies to make their processes more transparent and improve their workflows. In this way, companies create the basis for optimization measures and sustainable success, thereby ensuring their competitiveness.

FORCAM is always endeavored to optimize the solution FORCAM FORCE™ further, to enrich it with functions and to offer its customers the constantly growing, greatest possible use. For this purpose, several releases are published in the year.

This document lists functions that have been added or changed in the course of the **5.11.6** release. It serves to get an overview of the most important features in order to use FORCAM FORCE™ in the best possible way.

Detailed descriptions of the individual functions can be found in the respective product documentation.

## 2    FORCAM FORCE™ Common

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **Type selection for literal import** | Extended the literal import dialog: Added a function for selecting which literal type to be imported (e.g. lbl, err, etc.). The type can be selected in the dialog which appears after importing a file. | Workbench | Literal Manager | New |
| **Capitalize first letter, lowercase rest** | The Literal Manager already has the function in the context menu of a literal to capitalize the first letter. The other letters and the other words in that cell are ignored. A function was added to capitalize the first letter and at the same time lowercase all other words of that cell. | Workbench | Literal Manager | New |
| **Show changes after literal import** | After importing literals as a CSV file, a system notification informs about a successful import and shows the number of changes. After clicking on the notification, a dialog now lists all literal changes resulting from the import. | Workbench | Literal Manager | New |

# 3 Process

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **Send NC files and macro variables to machine**[1] | It is now possible to prioritize scanned orders, send NC files and macro variables to the machine, and automatically start the next operation at the end of the previous operation. For this purpose, an operation prioritization dialog is now available in the Shopfloor Terminal. The worker can now add operations which are downloaded from the ERP system - either manually or by scanning a barcode to the prioritization list - and set a processing sequence for the operations. The machine works in automatic mode and processes one after the other until all open orders are done. After processing the operation, the order/operation will be saved as done in the database and the next operation from the prioritization list will be started. | Shopfloor Terminal | Document Control | New |
| **Store process data in SQL** | FORCAM is going to end the OEM contract with MongoDB at the end of 2020. In order to still enable customers to display reports on process data, it is now possible to store the data in the SQL database. For this purpose, a new table for process data was created in SQL. A new flag "SQL" was added to the VPIE on the DCI of process data.[2] Activating this will allow the system to store the data in the SQL database. | Office | Track & Trace | New |
| **Cp and CpK for process capability** | Added the possibility to secure the current result of the process capability analysis on the trace object. The results of the process capability analysis are expressed in the value pair Cp and CpK according to DIN ISO 22514-2. In addition to saving the value pair, it is also possible to determine the process capability including alarming in case of limit value violations. The proof of capability and control of processes is part of DIN EN ISO 9001. | Office | Track & Trace | New |
| **Display digital BOM** | Added the possibility to display a digital BOM for a single piece. The BOM can be displayed in the Track & Trace reporting in the "Digital BOM Info" tab. | Office | Track & Trace | New |

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[1] Sending of NC files and macro variables is dependent on the age and compatibility of the machine.
[2] The customer is in charge of dimensioning the SQL database accordingly so that it can handle the load, depending on the data volume and custom reports.

**Process**

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **Export and import container configurations** | Introduced the export and import functionality for container configurations. | Office | Track & Trace | New |
| **Moved all Trace configurations to Office** | The Track & Trace configuration used to be divided between Workbench and Office module. All configurations regarding Track & Trace are now centralized in the Office module. | Workbench, Office | Track & Trace | Changed |

# 4    SFT Configuration

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **Barcode scan prefix definition for profiles** | In some cases, the values received from a barcode scan contain certain prefix formats, leading to the search execution to not detect any results because of the prefix values. Introduced a new column in the profile section of the SFT configuration which allows to define the prefix value of a barcode input. | SFT | Profile configuration | New |

# 5 Planning

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **Use existing data for operation duration calculation** | When the operation duration is calculated, it will now be checked whether a material piece time for the corresponding workplace-material-number-combination is available in FORCAM FORCE™. If this is the case, this will be used for the operation duration calculation. | Workbench | Detailed Order Scheduling, Digital Planning Board | New |
| **Check operations sequence of every order when rescheduling** | For the manual rescheduling of operations, it is now possible to check whether the operation sequence (0010 ... 0020, 0030) is being followed. | Workbench | Digital Planning Board | New |
| **Color legends for mismatches** | It is now possible to configure color legends in the Gantt chart for cases with a configured mismatch. Example: All operations which are on schedule are displayed green and their color legend reads "On schedule". All operations which don't match this configuration (i.e. which are not on schedule) can have a different color which can now have its own color legend. | Workbench | Digital Planning Board | New |
| **Filter for edited operations** | Added a new filter for the operation table for displaying operations that have already been changed/edited. This allows the user to check which operation he has already edited before saving them as planning results. | Workbench | Digital Planning Board | New |

**Planning**

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **Multiple search entries** | The search area has entry fields for workplace, operation, etc. As for workplace, it is possible to search for multiple entries (workplaces) by separating them with a comma. Multiple search entries are now also possible for the following fields:<br>– Order number<br>– Operation number<br>– Operation description<br>– Material number<br>– Material text<br>– Operation user fields | Workbench | Digital Planning Board | New |

# 6 Productivity

| Title | Description | Affected module | Affected area | Status |
|---|---|---|---|---|
| **New stroke-based reports** | Introduced new reports with a stroke-based view for quantity processes as well as stroke processes. The stroke view is calculated based on quantities and stroke factor. Stroke factors can be changed dynamically which is only relevant and applied when an operation is started. The following reports are added:<br>– Hit Report (Workplace)<br>– Hit Development (Workplace) (Strokes calculated from quantities) | Office | Reporting | New |
| **Stroke factor allows decimals** | FORCAM FORCE™ is now able to process quantities and stroke factors as decimals. To avoid inaccurate rounding and data display in the Reporting, only integer production units are created on the production objects (booking objects). | All | | new |
| **Quality detail classes** | Introduced quality detail classes to FORCAM FORCE™. Quality detail classes add the possibility to group quality details. The classes are included in the master data, Shopfloor Terminal and in the Reporting. | All | | new |

# 7 Appendix

| Abbreviation | Meaning |
|---|---|
| **Cp, CpK** | The process capability indices Cp and CpK are key figures for the statistical evaluation of a process in production engineering. They indicate how reliably the goals set out in the specification are achieved. While the Cp value only indicates the ratio of the specified tolerance to the process variation, the CpK value also includes the position of the mean value in relation to the specified tolerance center. Therefore, the CpK value is always smaller than the Cp value. |
| **DCI** | Data Capturing Item |
| **err** | Error (message) |
| **lbl** | Label |
| **OEM** | Original equipment manufacturer |
| **SFT** | Shopfloor terminal |
| **SQL** | Structured Query Language (database language) |
| **UI** | User interface |
| **VPIE** | Virtual Process Image Editor |