T-DOC Interfaces

Integrate your hospital IT infrastructure

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T-DOC Interfaces Overview

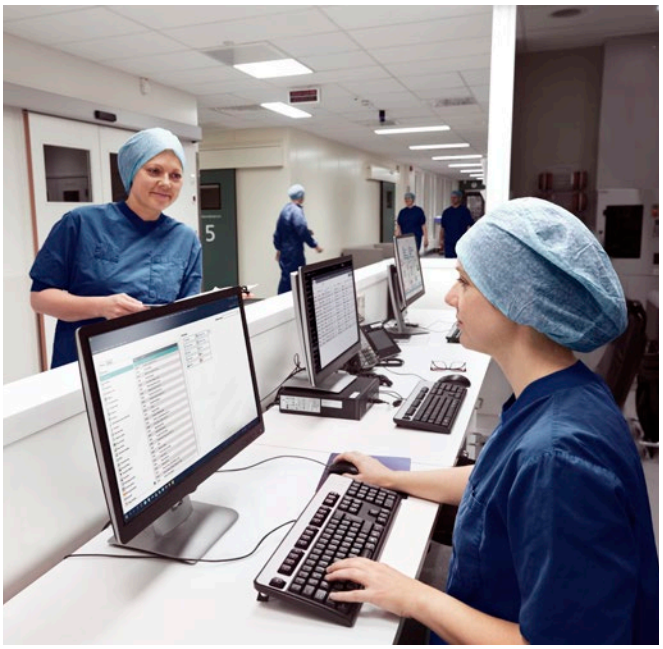
Interface name	Data Flows	Module required per data flow	Availability
T-DOC Data Exchange Module	Item Import Serial Import Item Accessory Import Article Export Customer/Dep. Export Customer/Dep. Import Supplier Import User Import Multimedia Export Multimedia Import	—	T-DOC 2000 Product no: J21700
T-DOC Material Management Interface*	Purchase Order Export Purchase Order Reply Import Customer Order Export	T-DOC Stock Advanced T-DOC Stock Advanced T-DOC Stock Advanced	T-DOC 2000 Product no: J9028
T-DOC Operation Interface*	Scheduled Operations and Order Import OR Registration Export OR Registration Import Operation/Procedure Type Import Goods Delivery Status Doctor/Surgeon Import Shared Preference List Export Preference List Forecast Export Order Template Import	T-DOC Operation Module T-DOC Operation Module T-DOC Operation Module T-DOC Operation Module T-DOC Stock Advanced T-DOC Operation Module T-DOC Operation Module T-DOC Operation Module T-DOC Operation Module	T-DOC 2000 Product no: J9024
T-DOC Patient Interface*	Patient Import OR Registration Export	T-DOC Patient ID Reg. T-DOC Operation Module	T-DOC 2000 Product no: J9030
T-DOC Invoice Basis Interface*	Invoice Export	T-DOC Stock Advanced	T-DOC 2000† Product no: J9032 T-DOC Select† Product no: TD1200
T-DOC External Loaner Interface	External Loaner Import	—	T-DOC 2000 Product no: J9034 T-DOC Select Product no: TD1201

** The T-DOC Data Exchange Module is a prerequisite for this interface*

† The availability of product and order details depends on interfacing with T-DOC Select or T-DOC 2000.

Interfacing T-DOC

Create coherence in your hospital IT infrastructure. Let T-DOC interface with your hospital IT solutions for streamlined workflows, increased quality, and seamless communication.



Increased quality and efficiency

T-DOC can interface with a wide range of hospital IT solutions such as material management*, surgical scheduling, hospital information, and financial systems. Using the T-DOC interfaces ensures that all master data is defined only once, and inconsistencies and errors across multiple systems are mitigated. Securing an automatic data flow implies less coordination and phone calls, which entails less strain on staff. Working conditions are improved while optimizing the quality outcome.

High level of information security

The transfer of data such as sensitive patient, staff and supplier data between IT systems put high demands on IT information security. T-DOC can help the hospital ensure compliance with local, national, or regional legislation for handling, storing, and managing sensitive data. In T-DOC, different types of data can be defined as sensitive, as well as which user can view which data, when and where.

Relevant data when you need it

The T-DOC interfaces can be configured to run live or according to a schedule. Live data exchange ensures that relevant data is always available, allowing you to make immediate and data-driven decisions. Scheduled data exchange is typically used to incur minimal load on hospital infrastructures, making relevant data regularly available such as at hourly intervals. T-DOC supports schedules with intervals from only a few seconds to hundreds of days. All exchanged data can be filtered in T-DOC according to your specific criteria so only the relevant type of data is imported/exported.

**The term material management system is used throughout this document. It refers to a central purchasing system and/or a stock tracking system.*

T-DOC Data Exchange Module

The T-DOC Data Exchange Module is the foundation of all T-DOC interfaces. In addition to containing the required software components, the module also includes the ability to import and export various types of master data.

Ensure essential data exchange

The T-DOC Data Exchange Module contains the engine for the exchange of data to and from T-DOC and is thereby a prerequisite for all other T-DOC Interfaces. This module also includes the ability to exchange master data such as customers, suppliers, items, item accessories, serialized items and products, multimedia and triggers, users, etc.

Data format

All the dataflows use XML as the data format.
Each dataflow has its own XML schema defining the contained data elements.

Data flows

Item Import
Allows import of items into the T-DOC database. Items can be created, changed, or marked as omitted. Items are things such as instruments, implants, disposables etc. Item data can be imported from a master data system such as a material management system, purchasing system and from instrument catalogues. Also, existing item data from an existing system can be imported into a new T-DOC system.

Serial Import
Allows import of item serial numbers for individually marked instruments (single instrument tracking/UDI) as well as product serial numbers for uniquely numbered instrument sets/trays.

Serial numbers can be imported from a master data system such as a material management system, purchasing system and from instrument catalogues. Also, existing serial numbers from an existing system can be imported into a new T-DOC system.

Item Accessory Import
Allows import of item accessories such as item groups, item specialties, and units of measure.

Item accessories can be imported from a master data system such as a material management system, purchasing system etc. When creating a new item in T-DOC, T-DOC will know the item accessories. When Importing item data, T-DOC will recognize the Item accessories coming from the master data system.

Article Export
Allows export of items and products in addition to standard data such as serial numbers, names, pictures, and stock related information. The export can be filtered, i.e. so only items, only products, or both are exported.

When exporting article data to OR management and OR scheduling systems, these systems will know what can be ordered from T-DOC. The export also entails that T-DOC can recognize items on preference lists if these are created directly in the OR systems.

When exporting article data to material management systems, products can become available for ordering directly in these systems.

Customer/Department Export
Allows export of customers/departments from T-DOC into another T-DOC system or 3rd party system.

Customer/Department Import
Allows import of customers/departments, so T-DOC knows which customers/departments can place orders in T-DOC, and where goods can be delivered to.

Customers/departments can be imported from any system, but it is typically done from a hospital information system, OR management system or material management system.

Supplier Import
Allows import of supplier data into T-DOC so each item in T-DOC will include its respective supplier data. Both supplier, repair vendor and manufacturer data can be imported, typically from a material management system.

User Import
Allows import of users into T-DOC when synchronizing T-DOC with another user database. This could either be an initial one-time import of all users in a system, for example if the hospital deploys a new system. Or it could be a continuous synchronization with a 3rd party user management system.

This data flow is NOT required to synchronize users in other systems controlled by Active Directory since T-DOC interfaces directly with Active Directory.

Multimedia Export
Allows export of pictures and video stored in T-DOC, along with information about which items, products or triggers the multimedia is linked to.

This data flow can be used when exporting from one T-DOC system to another, for example one T-DOC customer assisting another T-DOC customer but it can also be exported to other systems.

Multimedia Import
Allows import of pictures and videos into T-DOC. Items, products, and triggers in T-DOC often need multimedia for visual guidance. They can easily be associated with the imported multimedia.

This data flow requires the imported data to be structured in the same format as the Multimedia Export job.

T-DOC Material Management Interface

The T-DOC Material Management Interface enables reliable management of sterile goods, easy ordering, and optimized inventory control.

Complete stock management

The T-DOC Material Management Interface includes data flows allowing for the exchange of purchase orders and the ability to export information regarding all goods delivered from the sterilization department via T-DOC. Interfacing T-DOC with material management and central purchasing systems ensures an automatic flow of goods. Standardized ordering processes can be set up, enabling T-DOC to automatically reorder from internal or external suppliers when stock reaches a certain level. The same setup can be applied to the hospital department when ordering from a central hospital stock or the sterilization department stock. Accurate stock levels are maintained while ensuring stock and ordering transparency.

Traceability from manufacturing to patient

The T-DOC Material Management Interface allows for all order, manufacturer, and supplier related data to be streamlined and automatically stored in T-DOC for documentation and tracking purposes. Combined with the marking and tracking of single instruments, this enables the hospital to comply with UDI regulations. The entire life span of the instrument will be documented; from manufacturing, through supplier distribution, reprocessing, use on patient, until end of life. In case of a recall, T-DOC enables respective medical devices and all affected patients to be quickly cross referenced. Patient safety is thereby enhanced significantly.

Cross-hospital transparency

The T-DOC Material Management Interface enables higher transparency on goods, order flow and stock value. With greater transparency towards the user comes several benefits: High information level of articles such as stock level, package size, and price can bring down the consumption of goods. If the user can see the stock level is low, or an item is very expensive, it can create a higher awareness on the goods consumption.

Data flows

Purchase Order/Requisition Export

Allows export of purchase orders/requisitions created in T-DOC into a material management system.

The export can be done either automatically based on stock levels in T-DOC, or partly manually by requiring user approval before exporting (typically used when implementing new systems and new processes), or fully manual by users entering all data.

Purchase Order Reply Import

Allows import of purchase order/requisition replies from material management systems into T-DOC. This ensures that T-DOC is informed about expected delivery dates, delivered quantities, and back orders, thus ensuring correct stock levels are always maintained.

Customer/Department Order Export

Allows export of customer/department orders from T-DOC into a material management system or financial system. All delivered items from the sterilization department to all customers/departments can be exported.

The data flow is typically used to keep track of what has been delivered to each customer/department including details such as item numbers, their quantity, and potentially costs. This allows the external system to redistribute costs to the customers/departments that used the items/goods.

Data format

All the dataflows use XML as the data format.

Each dataflow has its own XML schema defining the contained data elements.

T-DOC Operation Interface

The T-DOC Operation Interface ensures T-DOC can be informed about all scheduled operations/surgeries, the instruments needed for them, and that the correct association of goods with surgeries and patients can be maintained.

Higher efficiency for OR staff

The T-DOC Operation Interface enables the association of goods with surgery and patient before, during or after the surgery. It also allows for creating patients in T-DOC if they do not exist at the time of import. As several registration tasks are performed prior to surgery, the OR nurse thereby saves time allowing her to focus on the surgery.

T-DOC knows the surgical schedule

It is of high importance that the sterilization department knows the surgical schedule and has the necessary tools to adapt deliveries to the everchanging surgical schedule. Combined with the T-DOC Case Cart Solution, the T-DOC Operation Interface enables the sterilization department to plan and prioritize production and deliveries for surgeries. This entails a higher quality, more efficient use of resources while ensuring on-time delivery of goods for surgeries and higher utilization of ORs.

Enhanced transparency and traceability

The association of goods with surgeries and patients enables T-DOC users to see where goods were used, the patient's name, date, time, room, and surgeon. This enhances the entire traceability process — from production to distribution, to use and finally return.

Data format

All the dataflows use XML as the data format.

Each dataflow has its own XML schema defining the contained data elements.

Data flows

Scheduled Operations and Order Import
Allows import of scheduled operations and orders for sterile goods for these operations. Orders that are not linked to operations can also be imported. The data is typically imported from an OR management/scheduling system but can also be imported from a hospital wide ordering system and other systems.

OR Registration Export
Allows export of instruments used in operations from T-DOC into an OR scheduling system. This is relevant when using T-DOC in the operating room for registering instruments and when maintaining traceability of the used instruments both in T-DOC and the OR management/scheduling system. The interface makes it possible to maintain traceability in both systems.

OR Registration Import
Allows import of surgery related data into T-DOC and association of goods used for specific surgeries and patients. Scanning of sterile goods and implants during surgery can be done directly in the OR scheduling system by scanning T-DOC barcodes, and data can later be imported into T-DOC. The interface makes it possible to maintain traceability in both systems.

Operation/Procedure Type Import
Allows import of operation types and procedure types into T-DOC from an OR scheduling system or from national/regional/local lists of approved procedure types.
Using this import, T-DOC will know which operation/procedure type can be performed at the hospital. Dynamic preference lists can then be created for each procedure type or for multiple procedure types potentially combined into operation types.

The Scheduled Operations and Order Import can be implemented without implementing this data import — in case a scheduled operation with an unknown operation/procedure type is imported into T-DOC, T-DOC can be configured to automatically create a new operation/procedure type.

Goods Delivery Status
External systems can query T-DOC about the delivery status of ordered goods from the sterilization department for at certain operation. T-DOC can inform if and when the goods can be delivered, and the actual status/location of the ordered goods. Using this functionality gives the OR staff a quick overview and can reduce the time searching for goods and the need for contacting the sterilization department for delivery status.

Doctor/Surgeon Import
Allows import of doctors/surgeons into T-DOC from a staff management, electronic medical records, or surgical scheduling system.

When T-DOC knows about the imported doctors/surgeons it is possible to create specific preference lists for these in T-DOC, before they start performing operations.
The Scheduled Operations and Order Import can be implemented without implementing this data import.

In case a scheduled operation with an unknown doctor/surgeon is imported into T-DOC, T-DOC can be configured to automatically create a new doctor/surgeon.

Shared Preference List Export
Allows export of all shared preference lists in T-DOC along with line content for each preference list. This interface is typically used when T-DOC is interfaced with automated storage systems.

Preference List Forecast Export
Allows export of the expected number of shared preference list content to be used. This interface is typically used when T-DOC is interfaced with automated storage systems.

Order Template Import
Allows import of order templates from external systems into T-DOC. Customers/departments can easily create a new order by using a standard template and, if needed, adjust the specific order. This import is typically relevant for new T-DOC systems and is typically only used once or a few times.

T-DOC Patient Interface

The T-DOC Patient Interface allows for importing and/or validating patient data for correct association with used sterile goods. Export of traceability data is also included.

Ensure valid patient data

The T-DOC Patient Interface enables import of patient details, for example from patient management systems, so patients are known to T-DOC and used sterile goods can be associated with the patient. This allows for a complete audit trail of sterile goods, from reprocessing, through delivery, to use on a patient. The T-DOC Patient Interface can also be used to immediately verify the validity of patients. For example, when associating a surgery/sterile goods with a patient in T-DOC, T-DOC can check with the patient management system that the patient does in fact exist. The interface also allows for modifying existing patient data in T-DOC.

Data flows

Patient Import

Allows for import of patient related data such as name, ID, age etc. The purpose is to ensure that all patients are known at the time of patient registration.

This data import allows you to disable ad-hoc patient creation and ensures correct patient registration.

OR Registration Export

Allows export of instruments used in operations from T-DOC into an OR scheduling system. This is relevant when using T-DOC in the operating room for registering instruments and when maintaining traceability of the used instruments both in T-DOC and the OR management/ scheduling system. The interface makes it possible to maintain traceability in both systems.

Data format

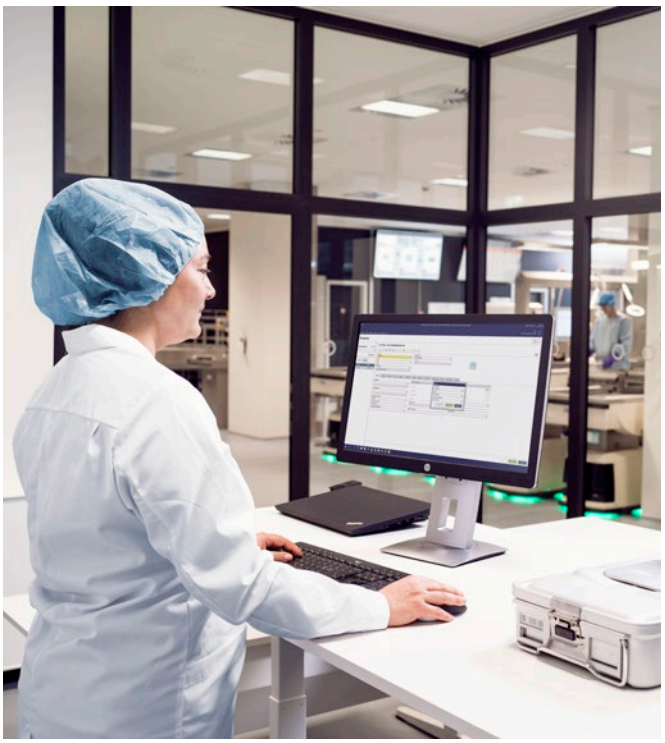
Both dataflows use XML as the data format. Each dataflow has its own XML schema defining the contained data elements.

T-DOC Invoice Basis Interface

The T-DOC Invoice Basis Interface enables smooth invoicing of customers for their purchased goods.

Manage all customer invoicing

The T-DOC Invoice Basis Interface is used to export data on goods that have been delivered to customers or departments. The data is typically exported from T-DOC to a financial system or a material management system. Data exports can be performed at regular intervals, for example daily, weekly, or monthly. Using this information, the external system can invoice the customers for the goods they have purchased. The exact way the external system manages and uses the exported data is at their own discretion.



Data flows

Invoice Export

Allows for export of data about what items/goods has been delivered from the sterilization department to customers/ departments. At an overall level, the data can be exported with different amounts of details.

Predefined detail levels

Customer details

Includes the customer identifier, name, account number, number of transactions and total amount for the customer.

Article details

Includes all the customer details and all article (item and product) identifiers, names, number of transactions and total amount for the customer.

Order or Delivery Note details

Includes the customer details, order number and reference, number of transactions and total amount.

Order or Delivery Note lines

Includes the customer details, order number and reference, all article (item and product) identifiers, names, quantities, and amounts.

Data format

All the dataflows use CSV as the data format.

Data separator, data delimiter, decimal separator and decimal precision can be configured by the user.

T-DOC External Loaner Interface

The T-DOC External Loaner Interface enables seamless communication between T-DOC and external loaner tray management systems.

Smooth documentation of loaner instruments

When the loaner tray arrives at the hospital, it is checked-in in the external loaner system at the vendor kiosk. During check-in, the T-DOC External Loaner Interface allows the external loaner tray management system to hand over loaner trays to T-DOC. Vendor information such as ID, name, barcode data and pictures are imported into T-DOC.
A unit number is assigned, and the loaner product follows the same sterile flow as non-loaner products with documentation and complete traceability.

Trays that are often loaned or on consignment can be created with all associated data in T-DOC, so loaner products take full advantage of T-DOC functionalities equal to the hospital's own instruments.

Data flows

External Loaner Import

Allows import of information about loaner trays when these have been checked in via an external loaner system. This allows the loaner tray to be scanned as a normal tray in T-DOC while also tracking loaner-specific information. In addition to ID, name, and barcode data it is also possible to import pictures as well as data specific to each external system.

Data format

The data flow uses XML as the data format and an XML schema defining the data is available. The format is open and allows any system that can deliver the data in the right format to be interfaced with T-DOC.

For each officially supported external loaner system, there is a system-specific communication that uses a specific data format. Please contact your Getinge sales representative for information about officially supported external loaner systems.

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