PUBLIC

# How to Define and Use Formatted Search

## Solutions from SAP

## SAP Business One 2005A SP01

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## Icons

| Icon | Meaning |
|---|---|
|  | Caution |
|  | Example |
|  | Note |
|  | Recommendation |
|  | Syntax |

## Typographic Conventions

| Type Style | Description |
|---|---|
| *Example text* | Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options.<br>Cross-references to other documentation. |
| **Example text** | Emphasized words or phrases in body text, titles of graphics and tables. |
| EXAMPLE TEXT | Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE. |
| `Example text` | Screen output. This includes file and directory names and their paths, messages, source code, names of variables and parameters as well as names of installation, upgrade and database tools. |
| `EXAMPLE TEXT` | Keys on the keyboard, for example, function keys (such as `F2`) or the `ENTER` key. |
| **`Example text`** | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| **`<Example text>`** | Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries. |

## Contents

# How to Define and Use Formatted Search

## Introduction

The Formatted Search function enables you to enter values, originated by a pre-defined search process, into any field in the system (including user-defined fields).

You can use the formatted search function to:

- Enter values automatically into fields using various objects in the system.
- Enter values into fields using a pre-defined list.
- Enter values automatically into fields with pre-defined queries (user queries).
- Create dependencies between fields in the system. For example, the value in field X influences the value in field Y.
- Display fields that can be displayed only by using queries. For example, User Signature, Creation Date, Open Checks Balance (for business partners).

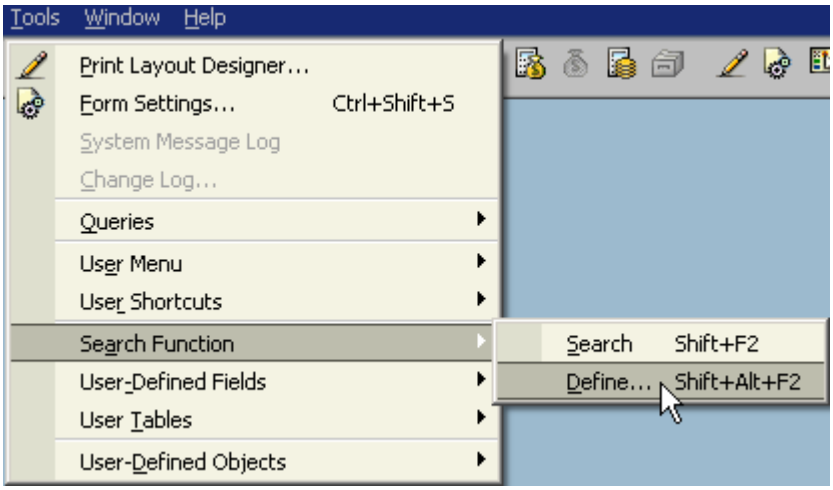
## The Formatted Search Menu

### Use

Use *Tools* menu items to define, search and view search fields.

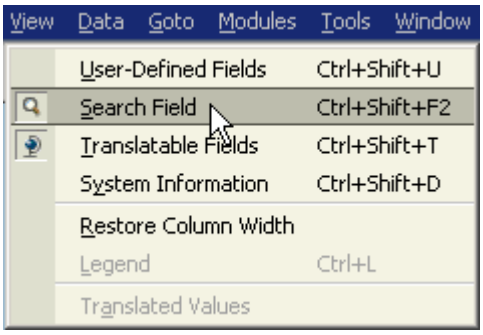
### Procedure

1. To define formatted search, open the required window in SAP Business One and select from the menu bar *Tools* → *Search Function*:




| Option | User action | Description |
|---|---|---|
| *Search* | Place the cursor in a field with formatted search. | Activates the formatted search. |
| *Define* | Place the cursor in a required field. | Opens the *Define Formatted Search* window. |

2. To display fields with formatted search, select from the menu bar *View* → *Search Field*:

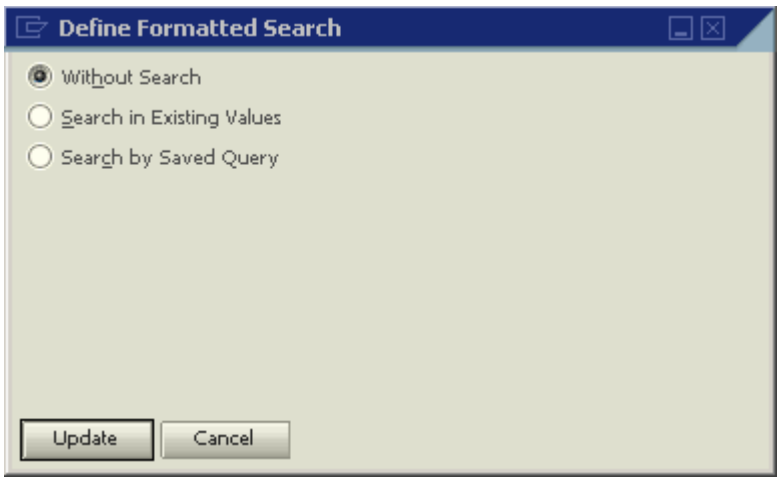



| Option | Description |
|---|---|
| *Search Field* | Displays the special icon in fields with formatted search.<br>Select this option again to hide the search icon. |

# Defining Formatted Search

## Procedure

1. Place the cursor in a required field (any field in the current open window) and select from the menu bar *Tools* → *Search Function* → *Define*, or use the key combination `Alt+Shift+F2`.
2. The *Define Formatted Search* window opens:



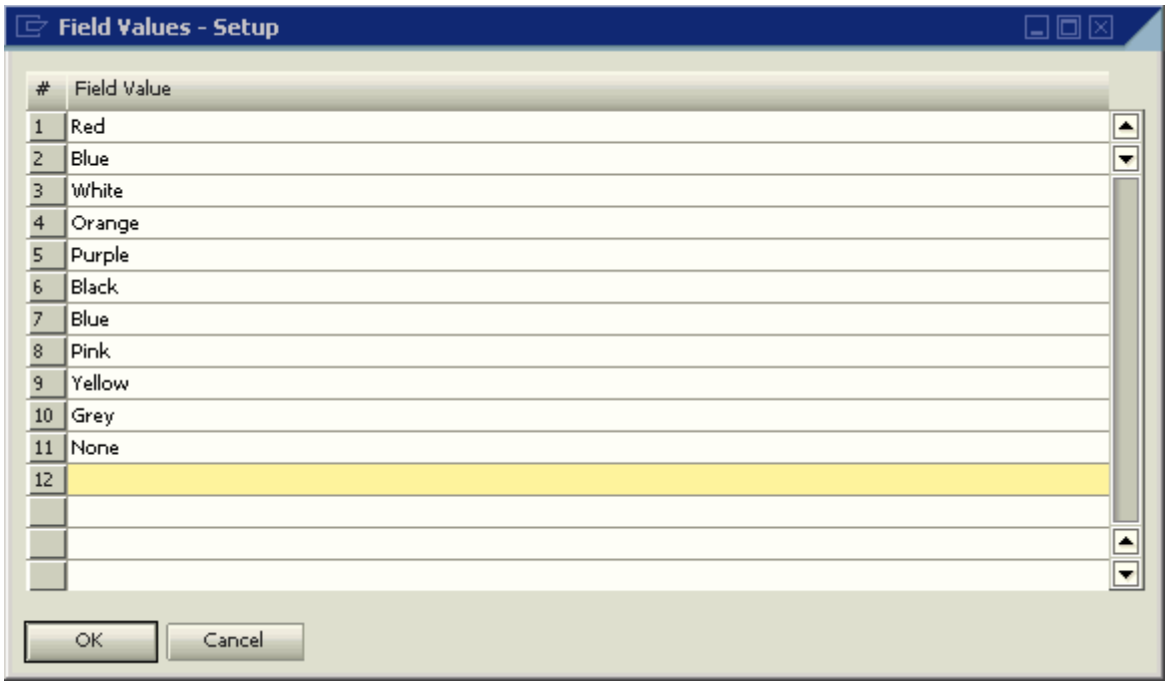

| Option | Description | Comments |
|---|---|---|
| *Without Search* | No formatted search is defined for the field. | Select to cancel a formatted search defined for a certain field. |
| *Search in Existing Values* | Select to define a list of values applicable for the search field. | Choose the ... icon to open the *Field Values – Setup* window. |
| *Search by Saved Query* | Select to link a user-defined query to the search field. | Additional fields appear for this option. |

# Searching in Existing Values

## Procedure – Setting-Up Field Values

1. When you select *Search in Existing Values*, the icon  appears in the *Define Formatted Search* window.

   Choose this icon to open the *Field Values – Setup* window:




2. Enter a list of values relevant for the field.
3. Choose *Update* and *OK* to confirm the data.

   You are now back in the *Field Values – Setup* window.
4. Choose *Update* again to complete the definition.

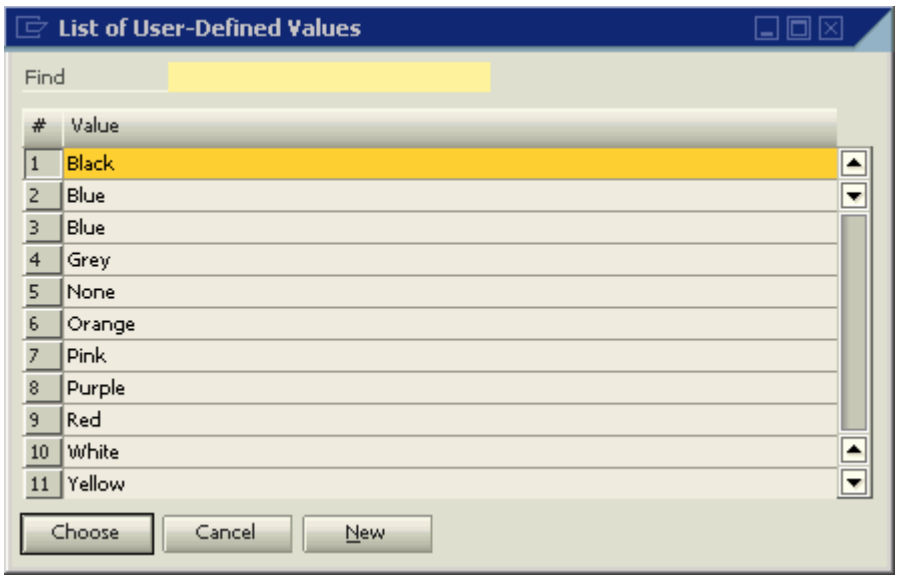
   Now you can search in the existing values you have defined for this field.

## Procedure – Searching Existing Values

1. Place the cursor in the search field.
2. Select from the menu bar *Tools* → *Search Function* → *Search* (or use the key combination `Shift+F2`).

   This opens the *List of User-Defined Values* window, displaying the values entered in the *Field Values – Setup* window:




3. Choose a required value from the list.
4. The value is entered automatically in the field.

## Procedure - Adding and Updating Values in a List of Existing Values

1. Place the cursor in the search field and from the menu bar select *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`).
2. The *Define Formatted Search* window opens. Choose the  icon.
3. The *Field Values – Setup* window opens. The cursor is placed in the next available row.
4. Enter a relevant value in this row and choose *Update*. You can also update an existing value and choose *Update* to save your changes.

   Another way to add new values to a list of existing values is to choose the *New* button in the *List of User-Defined Values* window which opens as a result of performing the formatted search.

## Procedure - Deleting Values from a List of Existing Values

1. Place the cursor in the search field and select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`).
2. The *Define Formatted Search* window opens. Choose the ... icon.
3. The *Field Values – Setup* window opens. The cursor is placed in the next available row.
4. Place the cursor in the relevant row and select from the menu bar *Data* → *Remove* or right click the mouse and select *Remove*.
5. Choose *Update*. A system message appears: "*Are you sure you want to delete this data?*"
6. Choose *Yes* to approve the removal.

The CUVV table in the company's database saves the existing values reservoir.

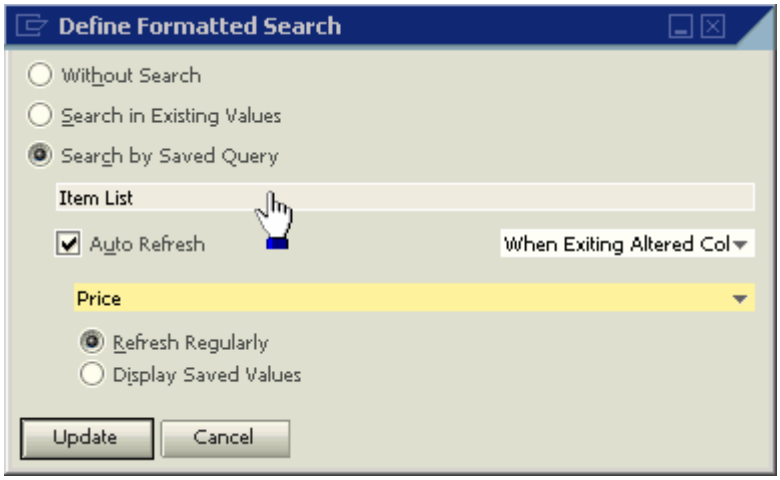
# Search by Saved Query

## Use

You can use two types of queries in a formatted search:

1. Queries retrieving data from the current active window
2. Queries retrieving data from various tables found in the company database

When you select the *Search by Saved Query* option in the *Define Formatted Search* window, it is possible to link a saved query to the search field:



## Procedure

1. Place the cursor over the blank field under *Search by Saved Query*.

   The cursor changes into a hand shape.

2. Double click the mouse on the blank field to open the *Query Manager* window.

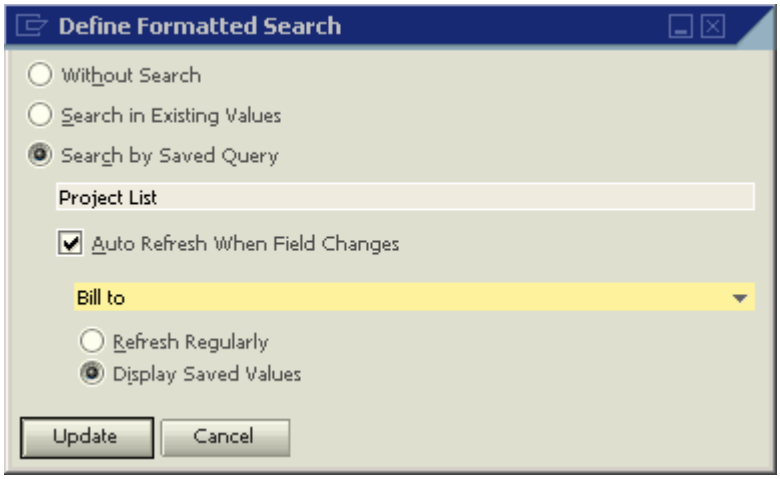
3. Locate the required query, click it, and choose *Open*.

   The query name is entered in the field.

   The *Define Formatted Search* window changes its display for the Auto Refresh option according to the selected field type: Header or Table.

## Auto Refresh When Field Changes - Header Fields

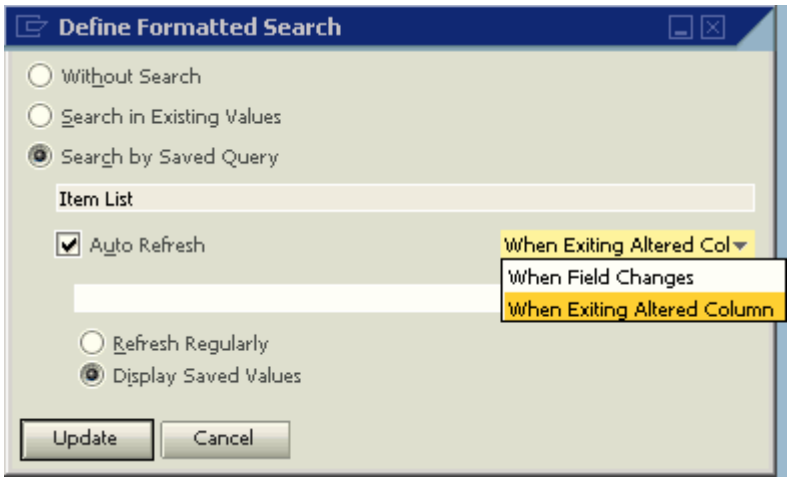



- **Deselect** the box *Auto Refresh When Field Change*s, to activate the query linked to the field only when placing the cursor in the field and selecting from the menu bar *Tools* → *Search Function* → *Search* (or using the key combination `Shift+F2`).
- **Select** the box *Auto Refresh When Field Change*s to enable an automatic refresh of the values in a field defined with a formatted search.

  Refresh means a re-execution of the linked query and the display of its results in the field to which it is linked.

## Auto Refresh - Table Fields




- **Deselect** the box *Auto Refresh*, to activate the query linked to the field only when placing the cursor in the field and selecting from the menu bar *Tools* → *Search Function* → *Search* (or using the key combination `Shift+F2`).
- **Select** the box *Auto Refresh* to display an additional field on the right.

Two elements must be selected to conduct an Auto Refresh for a Table type field:

- The first element is the field type used for the refresh operation: by Header field or by Table field.
- The second element is the field name.

| Option | User action and values | Comments |
|---|---|---|
| *When Field Changes* | Select to refresh the field when a **Header** field changes.<br>Select the required field from the list of Header fields found in the drop down list located below the *Auto Refresh* box. | Any change or update of the selected field will cause the search field to be refreshed.<br>For example, a change in the selected Header field will refresh all the rows in the table. |
| *When Exiting Altered Column* | Select to refresh the field when a **Table** type field changes.<br>Select the required field from the list of Table type fields found in the drop down list located below the *Auto Refresh* box. | Any change or update in the selected field will cause the search field to be refreshed. |

| Field | User action and values | Comments |
|---|---|---|
| *Refresh Regularly* | Select to refresh the search field each time you open or browse to the document or window containing the formatted search.<br>If the field is linked to a query that opens a multi-row 'List of' window, the first value appearing on the list will be selected. |  <br>Avoid using the Refresh Regularly option under this type of query since it might affect documents you did not intend to affect.<br>  <br>Use the Refresh Regularly option in specific cases only, since each time you browse to an existing document, all the formatted searches defined in the document are activated. This might cause the document to be displayed very slowly.<br>If you manually change a value retrieved by a formatted search and save the document, the next time you display the document, the manually changed value will be calculated again! |
| *Display Saved Values* | Select to display the value saved in the field during the addition/update of the document. That is, the value saved in the database. | The field will be refreshed only if you replace the field linked to the query. |

*Auto Refresh* is not implemented in fields that cannot be updated. For example, the *G/L Account Code* field in an existing journal entry, the *Item Number* in an existing Delivery and so on.

*Auto Refresh + Refresh Regularly* is similar to *Auto Refresh + Display Saved Values*, apart from the fact that the last one does not refresh the value when browsing or finding a document.

Limitation: When browsing through editable documents (such as Sales Orders), **Header** fields with Auto Refresh are refreshed, however the document status does not change from *OK* to *Update*.

## Updating a Linked Query

The link to the query is saved even if the actual query sentence is updated.

## Procedure

To replace a linked query:

1. Select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`) to open the *Define Formatted Search* window.
2. Place the cursor over the query name, hold down the `Ctrl` key and double click the field.

   The *Query Manager* window opens.
3. Select a new query by clicking its name, and choose *Open*.

   The new query name is displayed in the *Define Formatted Search* window.
4. Choose *Update* to save your changes.

## Retrieving Data by Linking a Query to a Search Field

You can retrieve data using two ways by linking a query to a search field:

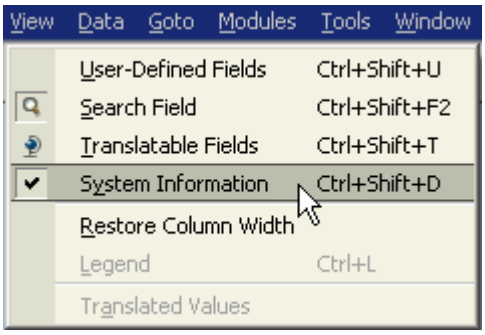
1. Data from the various database tables.
2. Data from the current active window (form).

### Data from the Current Active Window (Form)

You can retrieve two types of data from the active window:

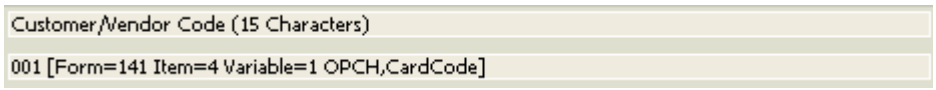
| Option | Description | Comments |
|---|---|---|
| *Table Data* | Refers to any table inside SAP Business One documents. |  The Items table in sales and purchasing documents or journal entry rows in a journal entry. |
| *Header Data* | Refers to any data outside the table data |  Document numbers and business partner codes in sales and purchasing documents or journal entry numbers in the journal entry window. |

3. To display system information relevant to formatted search queries, select from the menu bar *View* → *System Information*:




The system will then display relevant information on the status bar according to the location of the cursor.

The system displays the following information when you place the cursor over the *Vendor* field in an A/P Invoice:




To retrieve data from the active window, you need to create a special query.

SAP Business One provides two different syntaxes for this type of query:

- `$[Tablename.Fieldname]`
  - **Tablename** – Indicates the table to which the active window relates.
  - **Fieldname** – The field from the active window.
- `$[$Field Index.Field Column.Number/Currency/Date/0]`

  This syntax uses the field's index instead of the specific document table.

  This query syntax includes 3 elements:
  - **Field Index** – You can relate to each field in the active window using a unique index.
  - **Field Column** - If the required field is a table field (Item Number, Item Description, Unit Price, Quantity in sales and purchasing documents and so on) relate to it by index and column numbers. If the required field is a header field, set this element to 0.
  - **Number** / **Currency** / **Date** / **0**
    - Use **Number** if the required field includes a number + a currency symbol (item price, document total), to retrieve the number (without the currency symbol or the unit of measurement). This separation is essential when you wish to use the price for arithmetic expressions.
    - Use **Currency** to retrieve the currency symbol or the unit of measurement.
    - Use **Date** if the required field is a Date field and you need to use it for computation
    - Use **0** if the field contains a single value (Quantity, Item Number, Item Description, Business Partner Code or Document Number)

# Example 1

## Objective

Retrieve the business partner code from the A/R Invoice window and enter it in the *Remarks* field in the A/R Invoice window.

## Procedure

1. Open the Query Generator window.
2. In the *Select* area type `$[$4.0.0]` or `$[OINV.CARDCODE]`. The digit `4` stands for the business partner code's index. The first `0` digit indicates that the business partner code is a Header field. The last `0` digit indicates that the business partner code contains a single value.
3. Choose *Execute*.
4. Choose *Save* to save the query.
5. Open the *A/R Invoice* window.
6. Enter a business partner code in the *Customer* field.
7. Place the cursor in the *Remarks* field.
8. To define the *Remarks* field as a search field, select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`).
9. Select *Search by Saved Query*.
10. Select the saved query.
11. Select *Auto Refresh When Field Changes*.
12. Click the drop down list and select *Customer/Vendor Code*.
13. Select *Display Saved Values*.

To test the search field, change the customer code in the invoice. Changing the customer code updates the *Remarks* field automatically.

We recommended that you use the string `$[$4.0.0]` rather than the string `$[OINV.CARDCODE]`, since the first one can be linked to search fields in any sales or purchasing document while the second one can be linked only to A/R invoices.

# Example 2

## Objective

Retrieve the item number from an active *Sales Order* window and enter it in a user-defined field.

## Procedure

1. Create a new user-defined field in *Marketing Documents - Rows*. Since the user-defined field properties need to be identical to the *Item Number* field properties, the user-defined field has to be alphanumeric, regular and with a length of 20 characters.
2. Open the *Query Generator* window.
3. In the *Select* area type `$[$38.1.0]` or `$[RDR1.ITEMCODE]`
4. Save the query. The number `38` stands for the item index. The digit `1` stands for the item column. The digit `0` indicates that the item contains a single value.
5. Open the *Sales Order* window.
6. Type a customer code in the *Customer* field.
7. Type an item number in the *Item No.* column.
8. Locate the user field in the items table and place the cursor in it.
9. To define a formatted search for this user-defined field (step 1), select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`).
10. Select *Search by Saved Query*.
11. Select the saved query (step 4).
12. Select the box *Auto Refresh*.
13. Select *When Exiting Altered Column*.
14. Select the field *Item No.* field
15. Select *Display Saved Values*.

To test this search field, change the item number. Changing the item number updates the search field automatically.

# Example 3

## Objective

Retrieve the unit price (the numeric value) from a sales or purchasing document window and enter it in a user-defined field.

## Procedure

1. Create a new user-defined field in *Marketing Documents - Rows*. The user-defined field type - *Units and Totals*. Structure – *Amount*.
2. Open the *Query Generator* window.
3. In the *Select* area type `$[$38.14.NUMBER]`. The number `38` stands for the price index. The number `14` stands for the *Unit Price* column. `NUMBER` indicates the price's numeric value.
4. Save the query.
5. Open any sales or purchasing document window.
6. Type a business partner code in the *Customer* or *Vendor* field.
7. Type an item number in the *Item No.* column.
8. Locate the user-defined field (step 1) in the document table and place the cursor in it.
9. Select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`).
10. Select *Search by Saved Query*.
11. Select the saved query you have created in step 3.
12. Select *Auto Refresh*.
13. Select *When Exiting Altered Column*.
14. Select the *Unit Price* field.
15. Select *Display Saved Values*.

To test this search field, change the price. Changing the price updates the search field automatically.

The numeric value retrieved to the user-defined field can be used for arithmetic expressions.

# Example 4

## Objective

Retrieve the unit price currency (the currency symbol) from a sales or purchasing document window and enter it in a user-defined field.

## Procedure

1. Create a new user-defined field in *Marketing Documents - Rows*. User-defined field type - *Alphanumeric*. Structure – *Regular*. Size – *3*.
2. Open the *Query Generator* window.
3. In the *Select* area type `$[$38.14.CURRENCY]`
4. Save the query.
5. Open any sales or purchasing document window.
6. Type a business partner code in the *Customer* or *Vendor* field.
7. Enter an item number in the *Item No.* field.
8. Locate the user-defined field in the document table and place the cursor in it.
9. Select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination `Alt+Shift+F2`).
10. Select *Search by Saved Query*.
11. Select the saved query you have created in step 3.
12. Select *Auto Refresh*.
13. Select *When Exiting Altered Column*.
14. Select the *Unit Price* field
15. Select *Display Saved Values*.

To test the search field, change the price currency. Changing the price currency will update the search field automatically.

# Example 5

## Objective

Retrieve the document's Posting Date + 20 days from any sales or purchasing document and enter it in the *Due Date* field.

## Procedure

1. Create the query `$[$10.0.DATE] + 20`
2. Link the query to the *Due Date* or *Delivery Date* field (depending on the document type).
3. Select *Auto Refresh*.
4. Select *When Field Changes*.
5. Select the *Posting Date* field.
6. Select *Display Saved Values*.

To test this search field, change the Posting Date. Changing the Posting Date updates the search field automatically.

# Example 6

## Objective

Retrieve the tax amount per 1 item unit from any sales or purchasing documents and enter it in a user-defined field.

To get the tax amount per 1 item unit, the price before tax has to be subtracted from the gross price.

## Procedure

- The string `$[$38.14.NUMBER]` represents the price before tax.
- The string `$[$38.20.NUMBER]` represents the gross price.

1. Create the query `$[$38.20.NUMBER] – $[$38.14.NUMBER]`
2. Link the query to a user-defined field. Field type - *Units and Totals*. Structure – *Amount*.
3. Select *Auto Refresh*.
4. Select *When Exiting Altered Column*.
5. Select the *Unit Price* field.
6. Select *Display Saved Values*.

To test this search field, change the item price. Changing the item price updates the search field automatically.

# Example 7

## Objective

In this example you add the currency symbol to the value retrieved in example 6.

Since the tax amount is a numeric value and the currency symbol is an alphanumeric value, you need to use the SQL function `CAST`.

## Procedure

1. Create the query: `CAST($[$38.20.NUMBER] – $[$38.14.NUMBER] AS VARCHAR(20)) + [$38.20.CURRENCY]`
2. Link the query to a user-defined field. Field type - *Alphanumeric*. Structure – *Regular*.
3. Select *Auto Refresh*.
4. Select *When Exiting Altered Column*.
5. Select the *Unit Price* field.
6. Select *Display Saved Values*.

`AS VARCHAR (20)` indicates the size allocated to the subtraction result.

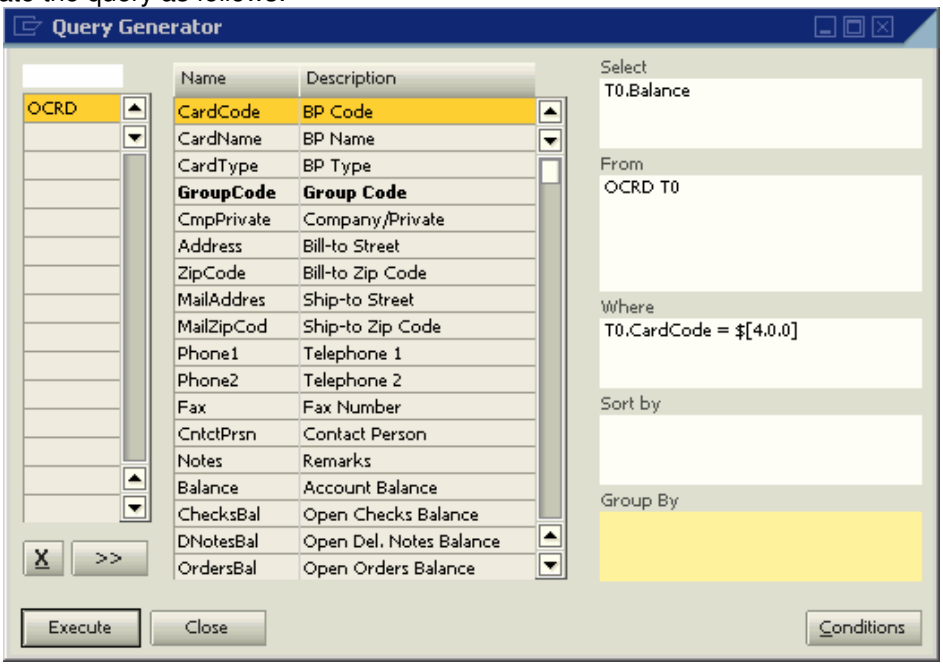
# Example 8

## Objective

Retrieve the business partner's account balance and enter in a sales or purchasing document.

## Procedure

1. Create the query as follows:




2. Link the query to a user-defined field; Field type - **Units and Totals**. Structure – **Amount**.
3. You now face three options to refresh the *Balance* field:
   - **Deselecting** the box *Auto Refresh When Field Change*s

     The current business partner balance will be entered to the field each time you click the *Balance* field and select *Search* from the *Search Function* menu (or use the key combination `Shift+F2`).

   - **Selecting** the box *Auto Refresh When Field Changes* **and** selecting the *Refresh Regularly* option

     The *Balance* field will be refreshed each time the refreshed field selected in the *Define Formatted Search* window changes.

     The current business partner balance will be entered to the *Balance* field.

     The balance will be refreshed each time you browse or find the document. In other words, if the business partner's balance has changed since the document was issued; the updated balance will be displayed in the *Balance* field each time you enter the document.

   - **Selecting** the box *Auto Refresh When Field Changes* **and** selecting the *Display Saved Values* option

     The *Balance* field will be refreshed each time the refreshed field selected in the *Define Formatted Search* window changes.

     The current business partner balance will be entered to the *Balance* field. However, the balance **will not** be refreshed each time you browse or display the document. You can, however, update the *Balance* field manually.

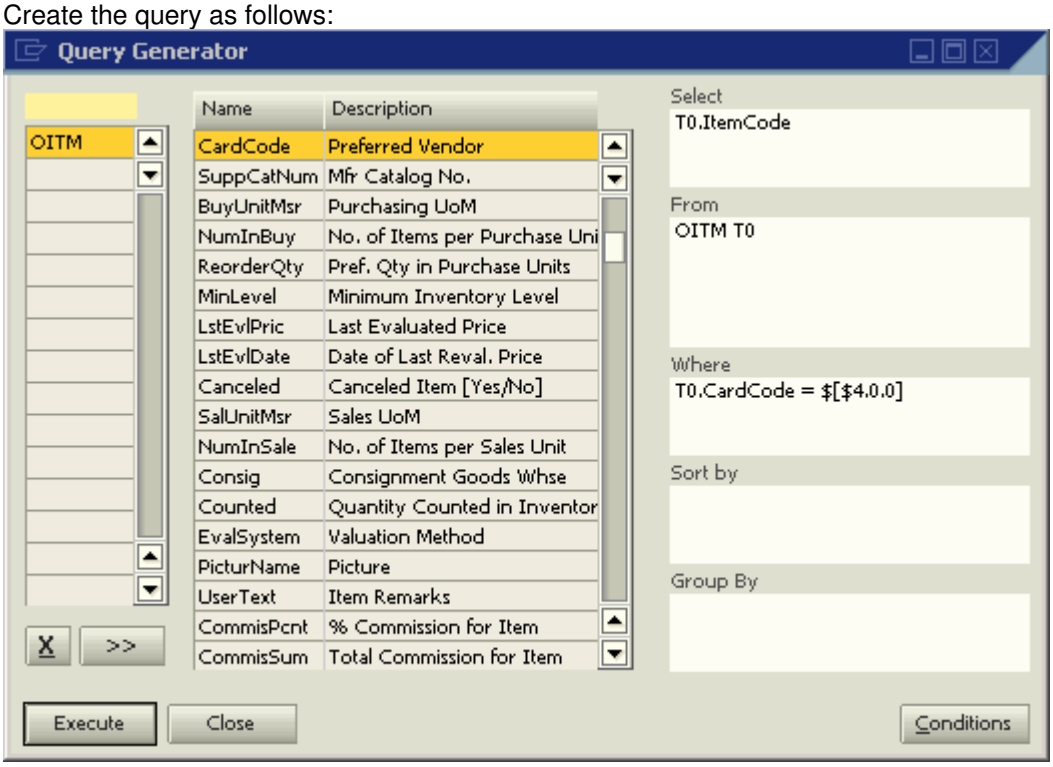
# Example 9

## Objective

Retrieve items from the *Item Master Data* window in which the *Preferred Vendor* is identical to the *Vendor Code* selected in a purchasing document.

## Procedure

1. Create the query as follows:




2. Link the query to the *Item No.* field in the required purchasing document.

# Example 10

## Objective

Copy a Sales Quotation to a Purchase Order.

The *Quantity* field will be incorrect if an item in the Sales Quotation is found in more than one row.

## Procedure

Select from the menu bar *Tools* →*User-Defined Fields* →*Manage User Fields*. Click on *Marketing Documents* and click on *Title*.

1. Create a user-defined field and name it *QUOTNO*.
2. To retrieve items from the required Sales Quotation, create the following query: `SELECT T0.ITEMCODE, T0.QUANTITY, T1.DOCNUM FROM QUT1 T0 INNER JOIN OQUT T1 ON T0.DocEntry = T1.DocEntry WHERE T1.DocNum = $[OPOR.U_QUOTNO]`
3. Name the query: *Get Items from Quotation to Purchase Order*.
4. To retrieve each item's quantity from the required Sales Quotation, create the following query: `SELECT T0.QUANTITY, T0.ITEMCODE, T1.DOCNUM FROM QUT1 T0 INNER JOIN OQUT T1 ON T0.DocEntry = T1.DocEntry WHERE T1.DocNum = $[OPOR.U_QUOTNO] AND T0.ITEMCODE = $[$38.1.0]`
5. Name the query: *Get Quantity from Quotation to Purchase Order*.
6. Open the *Purchase Order* window.
7. Display user-defined fields (*View* →*User-Defined Fields)*.
8. Link the query *Get Items from Quotation to Purchase Order* to the *Item No.* field.
9. Link the query *Get Quantity from Quotation to Purchase Order* to the *Quantity* field.
10. Select the box *Auto Refresh*.
11. Select the *Item No.* field.
12. Select *Display Saved Values*.
13. In the Sales Quotation window, enter the required Sales Quotation number in the *QUOTNO* user-defined field.
14. Click the *Item No.* field in the first row of the table.
15. Press `Shift+F2`.
16. Select the required items from the list.

    The *Quantity* field is updated automatically.

# Example 11 - Referring to User Tables in Formatted Search Queries

## Use

You can use a user table for storing different types of data. Later, you can use the formatted search functionality to retrieve required data from this user table.

## Objective

When you create a business partner, you would like to select the Zip Code of the business partner from predefined data storage according to country, city and address.

## Procedure

Select from the menu bar *Tools* → *User-Defined Fields* → *Manage User Fields*, create a User Table. Name it *ZIP*.

1. Add to the *ZIP* table the fields as follows: Country, City, Street, and ZipCode.
2. Fill this table manually (using *Tools* → *User Tables*) or automatically (by importing data into the *@ZIP* table using an existing list of addresses).
3. The system automatically creates the *Code* and *Name* fields when it creates a user table. You can enter successive numbers into these fields.
4. Create the query:

```
SELECT T0.U_ZipCode FROM [@ZIP] T0 WHERE T0.U_City = $[CRD1.City] and
T0.U_Country = $[CRD1.country] AND T0.U_STREET = $[CRD1.STREET]
```

5. Name the query: *Getting zip code from user table*.
6. Open the *Business Partner Master Data* window.
7. Switch to Add mode.
8. Type a business partner code in the *Code* field.
9. Choose the *Addresses* tab.
10. Choose *Bill to* or *Ship to*.
11. Type the address, city and country.
12. Link the query *Getting zip code from user table* to the *Zip Code* field.
13. Place the cursor in the *Zip Code* field and press `Shift+F2` to execute the formatted search.

    As a result, the required zip code is retrieved from the user table @ZIP.

# Example 12 - Additional Functions for Formatted Search Queries

## Use

You can retrieve the name of the current user logged in SAP Business One using the string `$[USER]`.

You can also retrieve the current posting period by using the string `$[PERIOD]`.

## Objective

When creating a new document, you would like to display the document creator's name in the *Remarks* field.

## Procedure

1. Create the query:

   ```
   SELECT T0.u_name FROM OUSR T0 WHERE T0.internal_k = $[USER]
   ```

2. Link the query to the *Remarks* field in the document.

   The `$USER` and the `$PERIOD` strings can be used for any window in SAP Business One.

# Example 13 – Entering Line Breaks in a Formatted Search Query

## Objective

You would like to display the user name in a document along with a proper text and line break between the text and the user name.

The required display: "*This document was created by: User Name*"

## Procedure

Use the query:

```
SELECT 'This document was created by: '+ char(13) + (SELECT T0.u_name
FROM OUSR T0 WHERE T0.internal_k = $[USER])
```

# Special Notes Regarding the Refresh Regularly Option

You should exercise caution when using the option to refresh a formatted search query regularly.

The following example demonstrates the consequences of using Refresh Regularly in an unnecessary situation.

## Objective

A user wants to open a limited list of items from a certain Item Group named *Printers* as a default in the *Sales Order* window.

## Procedure

1. Create the query as follows:

   ```
   SELECT T0.ItemCode FROM OITM T0 INNER JOIN OITB T1 ON T0.ItmsGrpCod =
   T1.ItmsGrpCod WHERE T1.ItmsGrpNam = 'Printers'
   ```

2. Name the query "*Printers List*".
3. Link this query to the *Item No.* field in the *Sales Order* window.
4. Select the box *Auto Refresh*.
5. Select *When Field Changes*.
6. Select *Customer/Vendor Code*.

The Auto Refresh will cause undesired results in two cases:

- When opening the *Sales Order* window, SAP Business One automatically selects the first item retrieved by the query “*Printers List*”.
- When opening an existing Sales Order (Status = Open), SAP Business One replaces each existing item in the Sales Order with the first item retrieved by the query “*Printers List*”.

The Refresh Regularly option might cause undesired results in some other cases.

### Objective

When creating a Sales Order, the you want to display the customer's account balance.

### Procedure

1. Create a user-defined field in *Marketing Documents - Title*. Name it "*Balance*".
2. Field properties: Type – *Units and Totals*, Structure – *Amount*.
3. Open the *Query Generator* and create the query:

   ```
   SELECT T0.Balance FROM OCRD T0 WHERE T0.CardCode = $[ORDR.CardCode]
   ```
4. Name the query "*Business Partner Balance*".
5. Link the query "*Business Partner Balance*" to the field "*Balance*".
6. Open the *Sales Order* window.
7. Display user-defined fields (*View* → *User-Defined Fields)*
8. In the *Balance* field, select from the menu bar *Tools* → *Search Function* → *Search* (or use the key combination `Shift+F2`) to execute the formatted search.
9. As a result, the system displays the business partner's account balance.
10. Select some items in the Sales Order and add it.

When navigating to this Sales Order after the customer was credited or debited for additional postings, the Refresh Regularly option changes the value in the *Balance* field in the Sales Order to the current account balance and not to the balance which was displayed when the Sales Order was issued. However, the current account balance is not saved in the database unless the Sales Order is updated, by choosing *Update* in the Sales Order window.

To avoid this, use the *Display Saved Values* option.

# Defining Formatted Search in Fields Influenced by Other Fields

There are some fields in the system which might be affected when updating other fields.

Examples in sales and purchasing documents:

- Updating the *Discount* field in a document row affects the *Price after Discount* and the row *Total* fields.
- Updating the row *Total* affects the *Discount* and the *Price after Discount* fields.
- Updating one of the *Factors* affects the *Quantity* field.
- Updating the *Quantity* sets the *Factor* values to 1.

When defining formatted search for this type of fields you should take into consideration that the value retrieved by executing the formatted search might be affected by the update of certain fields in SAP Business One, as mentioned earlier.

# Troubleshooting

## Analyzing Problems when Executing a Formatted Search

When executing a formatted search from a field linked to an incorrect SQL query, SAP Business One might display an error message in the status bar or do nothing instead of producing the expected result.

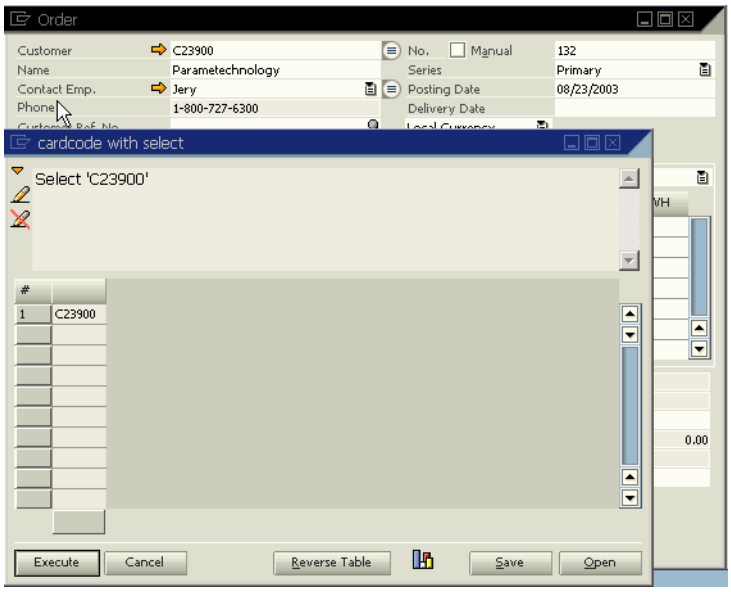
This means that the formatted search does not work.

To get detail information about the cause of the problem you need to run the formatted search query manually while the window referring to the formatted search is open.

## Common Errors

### Open Window

Do not save the query when displaying a query which refers to a specific window while this window is open, since then the field's references are replaced by the current values.




### Error Converting Data Type

To simplify this issue, use the query:

```
$[RDR1.Quantity] * 2
```

This query is incorrect since it is impossible to multiply the string `$[RDR1.Quantity]`, which is a non-numeric value, by the number `2`, which is a numeric value.

A correct query syntax is:

```
$[RDR1.Quantity.number] * 2
```

### "Character number is greater than allowed"

The system displays this error message when the result of a formatted search contains a number of characters which is greater than allowed for the field related to the formatted search.

Update the field's size according to the maximum expected result (relevant only to user-defined fields). If the field is a system field, adjust the result to the field's size.

## "Statement could not be prepared"

The error can be the result of several causes:

- The formatted search query refers to a field which does not exist.
- You have typed the name of a user-defined field without the "U_" prefix.
- SQL syntax error.
- A Space is missing between the Equal sign (=) and the field/string before the Equal sign.
- Comparing a field of Alpha type to a variable such as [%0] without using a single quotation mark → '[%0]'
- No values were returned after executing a formatted search

# Field Indexes for the Formatted Search Function

## Item Type Documents - Index and Column Numbers

The 'text' in the field name column indicates the field header (rather than the field content)

| Field Name | I | C |
|---|---|---|
| Items | 3 | |
| Summary Type | 75 | |
| Currency Type | 70 | |
| Document Currency | 63 | |
| Customer/Vendor (text) | 5 | |
| Customer/Vendor | 4 | |
| Name (text) | 55 | |
| Name | 54 | |
| Contact Emp. (text) | 83 | |
| Contact Emp. | 85 | |
| Manual | 78 | |
| No. (text) | 9 | |
| No. | 8 | |
| Posting Date (text) | 11 | |
| Posting Date | 10 | |
| Due Date (text) | 13 | |
| Due Date | 12 | |
| Customer Ref. No. (text) | 15 | |
| Customer Ref. No. | 14 | |
| Series (text) | 84 | |
| Series | 88 | |
| Code/Catalog no. | 79 | |
| Item Number | 38 | 1 |
| Catalog No. | 38 | 2 |
| Item Description | 38 | 3 |
| Bar Code | 38 | 4 |
| Catalog No. | 38 | 5 |
| Serial Number | 38 | 6 |
| Factor 1 | 38 | 7 |
| Factor 2 | 38 | 8 |

| Field Name | I | C |
|---|---|---|
| Factor 3 | 38 | 9 |
| Factor 4 | 38 | 10 |
| Quantity | 38 | 11 |
| Base Units | 38 | 12 |
| No. of Packages | 38 | 13 |
| Price w/o Dscnt | 38 | 14 |
| Discount % | 38 | 15 |
| Rate | 38 | 16 |
| Price | 38 | 17 |
| Tax Code | 38 | 18 |
| Price Including Tax | 38 | 20 |
| Total (LC) | 38 | 21 |
| Total (SC) | 38 | 22 |
| Total (Doc) | 38 | 23 |
| Whse | 38 | 24 |
| Del. Date | 38 | 25 |
| SE Code | 38 | 26 |
| SE | 38 | 27 |
| Comm. % | 38 | 28 |
| Acct. No. | 38 | 29 |
| Costing Code | 38 | 30 |
| Project Code | 38 | 31 |
| Open Qty. | 38 | 32 |
| On Hand | 38 | 33 |
| Sales Order | 38 | 34 |
| Committed | 38 | 35 |
| COGM | 38 | 37 |
| BOM Type | 38 | 39 |
| Tgt. Tab. | 38 | 41 |
| Target Key | 38 | 42 |
| Base Type | 38 | 43 |
| Base Ref. | 38 | 44 |
| Base Key | 38 | 45 |
| Base Row | 38 | 46 |
| BP Card | 38 | 49 |
| Length | 38 | 53 |

| Field Name | I | C |
|---|---|---|
| Width | 38 | 54 |
| Height | 38 | 55 |
| Volume | 38 | 56 |
| Vol. Unit. | 38 | 57 |
| Weight | 38 | 58 |
| Total Tax (LC) | 38 | 82 |
| Total Tax (Doc.) | 38 | 83 |
| Block No. | 38 | 86 |
| Import Log | 38 | 87 |
| Acquis. | 38 | 88 |
| Total Before Discount (text) | 23 | |
| Total Before Discount | 22 | |
| %Discount (text) | 25 | |
| %Discount | 24 | |
| Discount Sum | 42 | |
| Tax (text) | 99 | |
| Tax | 27 | |
| Total (text) | 30 | |
| Total | 29 | |
| Paid/Credited (text) | 32 | |
| Paid/Credited | 31 | |
| Balance Due (text) | 34 | |
| Balance Due | 33 | |
| Remarks (text) | 17 | |
| Remarks | 16 | |
| Journal Remark (text) | 19 | |
| Journal Remark | 18 | |
| Sales Employee (text) | 21 | |
| Sales Employee | 20 | |
| Payment Terms (text) | 48 | |

## Service Type Documents - Index and Column Numbers

| Field Name | I | C |
|---|---|---|
| Items | 3 | |
| Summary Type | 75 | |
| Currency Type | 70 | |
| Document Currency | 63 | |
| Customer/Vendor (text) | 5 | |
| Customer/Vendor | 4 | |
| Name (text) | 55 | |
| Name | 54 | |
| Contact Emp. (text) | 83 | |
| Contact Emp. | 85 | |
| Manual | 78 | |
| No. (text) | 9 | |
| No. | 8 | |
| Posting Date (text) | 11 | |
| Posting Date | 10 | |
| Due Date (text) | 13 | |
| Due Date | 12 | |
| Customer Ref. No. (text) | 15 | |
| Customer Ref. No. | 14 | |
| Series (text) | 84 | |
| Series | 88 | |
| Code/Catalog no. | 79 | |
| Description | 39 | 1 |
| G/L Account | 39 | 2 |
| Costing Code | 39 | 3 |
| Project Code | 39 | 4 |
| Price w/o Dscnt | 39 | 5 |
| Discount % | 39 | 6 |
| Rate | 39 | 7 |
| Price | 39 | 8 |
| Tax Code | 39 | 9 |
| Tax% | 39 | 10 |
| Price Including Tax | 39 | 11 |
| Total (LC) | 39 | 12 |

| | | |
|---|---|---|
| Total (SC) | 39 | 13 |
| Total (Doc) | 39 | 14 |
| SE Code | 39 | 15 |
| SE | 39 | 16 |
| Commission % | 39 | 17 |
| Open Amount | 39 | 18 |
| Tgt Type | 39 | 21 |
| Target Key | 39 | 22 |
| Base Type | 39 | 23 |
| Base Ref. | 39 | 24 |
| Base Key | 39 | 25 |
| Base Row | 39 | 26 |
| Base Card | 39 | 28 |
| Tax Total (LC) | 39 | 32 |
| Acquis. | 39 | 35 |
| Total Before Discount (text) | 23 | |
| Total Before Discount | 22 | |
| %Discount (text) | 25 | |
| %Discount | 24 | |
| Discount Sum | 42 | |
| Tax (text) | 99 | |
| Tax | 27 | |
| Total (text) | 30 | |
| Total | 29 | |
| Paid/Credited (text) | 32 | |
| Paid/Credited | 31 | |
| Balance Due (text) | 34 | |
| Balance Due | 33 | |
| Remarks (text) | 17 | |
| Remarks | 16 | |
| Journal Remark (text) | 19 | |
| Journal Remark | 18 | |
| Sales Employee (text) | 21 | |
| Sales Employee | 20 | |
| Payment Terms (text) | 48 | |
| Payment Terms | 47 | |

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