



**Dynamics**  
Shop

# User Guide for Microsoft Dynamics 365 Business Central

**Product:** SD Billing Engine

**Release:** D365 BC V21+

**Revision:** July 2023

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## 2 Getting Started

SD Billing Engine is a generic billing engine that can generate sales invoices from three sources or elements:

- Recurring contract setups with fixed recurring charges linked to a customer.
- Activity based entries either generated in Microsoft Dynamics 365 Business Central linked to the item ledger entry, or, imported into Microsoft Dynamics 365 Business Central.
- Manual entries which are items and events logged by users.

Using SD Billing Engine, you can bill:

- Fixed contract (recurring) set fees and invoice monthly. For example, warehouse space fees, annual software support fees, recurring management charges.
- Activity based billing either imported from an external source, or, generated from your item ledger entry based on activity in the period selected. For example, accepting delivery to a warehouse, receiving goods in.
- Manual event logging for special charges. For example, special haulage costs, inspection certs, pallet rebuilds, splitting out pallets, backup restore events.

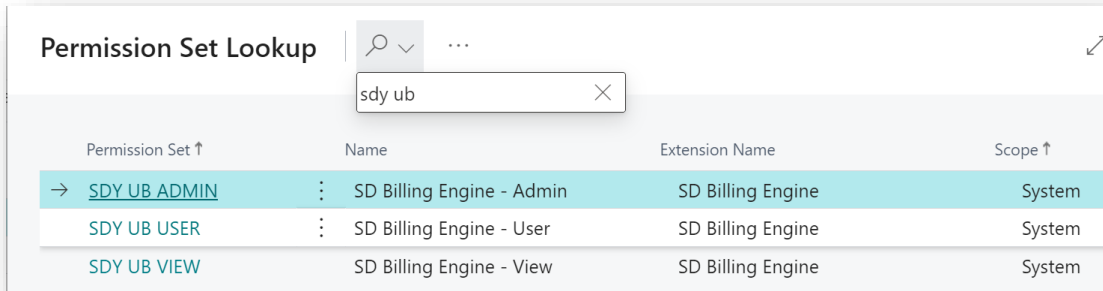
For each of the three sources, there is a default suggest billing handler calculation Codeunit. Using your setup, you can vary the suggest billing handler Codeunit to your own specific requirements. For the activity element setup there is also a get entries handler Codeunit that can be varied for your specific custom logic.

**Note: The activities that you are billing in the item ledger entry for activity based elements are billed on behalf of a third-party customer. You are billing the third-party customer, not the customer or vendor on the item ledger entry source line.**

**The item defines who you are billing, not the vendor or the customer. The item is unique to the customer. Each item for which the transaction is billable should be stamped with a customer dimension (Customer No.). Any item that you do not want to bill, can be left unstamped. Service items are ignored for activity based billing.**

### 3 Security Setup

We have provided the following permission sets for SD Billing Engine: SDYUBADMIN, SDYUBUSER and SDYUBVIEW (*Figure 3-1*).



Permission Set ↑	Name	Extension Name	Scope ↑
→ <a href="#">SDY UB ADMIN</a>	SD Billing Engine - Admin	SD Billing Engine	System
<a href="#">SDY UB USER</a>	SD Billing Engine - User	SD Billing Engine	System
<a href="#">SDY UB VIEW</a>	SD Billing Engine - View	SD Billing Engine	System

*Figure 3-1*

We have also created extensions on the following standard Microsoft Dynamics 365 Business Central Permissions:

- Exten. Mgt. - Admin includes SDYUBADMIN permissions.
- D365 BUS FULL ACCESS includes SDYUBUSER permissions.
- D365 BASIC includes SDYUBVIEW permissions.

**Note:** Users who do not use SD Billing Engine but who post Sales Invoices in Microsoft Dynamics 365 Business Central and are not granted the D365 BUS FULL ACCESS permissions will need to have read permission granted to the SDY UB Billing Engine Setup table.

## 4 Installing SD Billing Engine

To install **SD Billing Engine** from the Business Administration Shell:

1. Run the **Business Central Administration Shell** as **Administrator**.
2. To publish the extension from the package file (.app), use the **Publish-NAVApp cmdlet**.

Example:

```
Publish-NAVApp -ServerInstance BC170 -Path "C:\Users\name\Downloads\Simply Dynamics Ltd_SD Billing Engine_3.3.1.0.app"
```

3. To synchronise the schema changes, use the **Sync-NAVApp cmdlet**.

Example:

```
Sync-NavApp -ServerInstance BC190 -Name "SD Billing Engine"
```

4. To install the published NAV App, use the **Install-NAVApp cmdlet**.

Example:

```
Install-NAVApp -ServerInstance BC190 -Name "SD Billing Engine"
```

5. Open your Dynamics 365 Business Central Web Client and use the **Tell Me** to search for **Extension Management** (*Figure 4-1*).

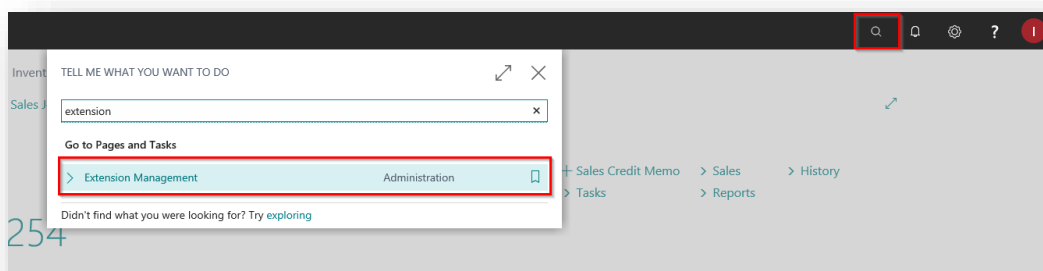


Figure 4-1

6. In the **Extension Management** list, you should see the **SD Billing Engine** App installed.

## 4.1 Allowing HttpClient Requests in SD Billing Engine

Switching on the **Allow HttpClient Requests** option allows SD Billing Engine to call an API that sends and returns licence key information to activate the product licence and to call GitHub to import sample data for the product. By default, the **Allow HttpClient Requests** option is switched on during installation of the product.

1. Open your Dynamics 365 Business Central Web Client and use the **Tell Me** to search for **Extension Management** (Figure 4-2).

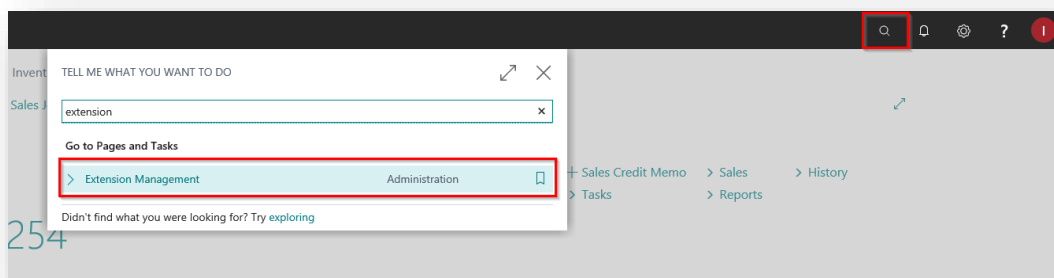


Figure 4-2

2. In the **Extension Management** list, you should see the **SD Billing Engine** App installed (Figure 4-3).

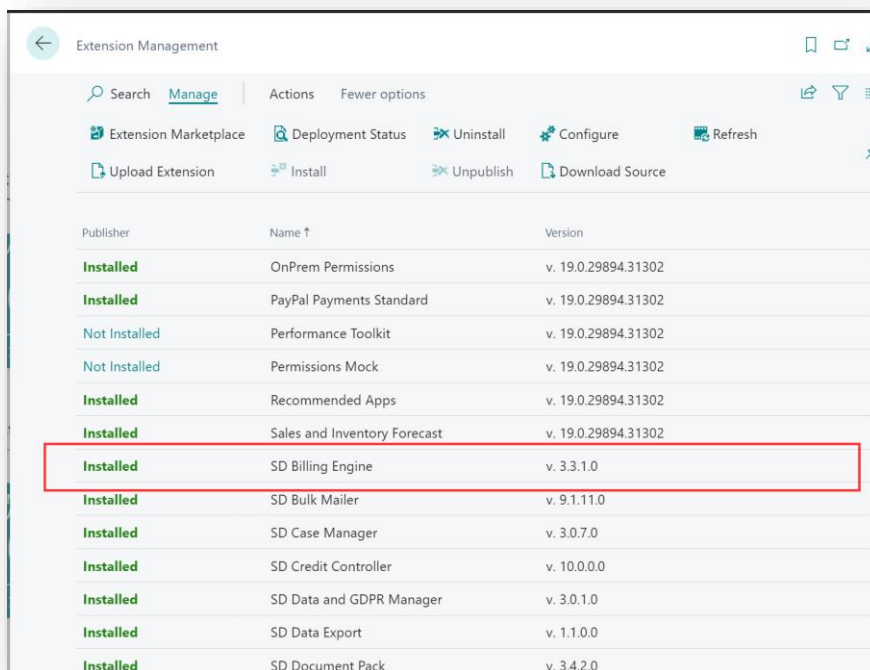


Figure 4-3

3. Select the **SD Billing Engine** App record and from the action bar, select the **Manage** group, and choose **Configure** (Figure 4-4).

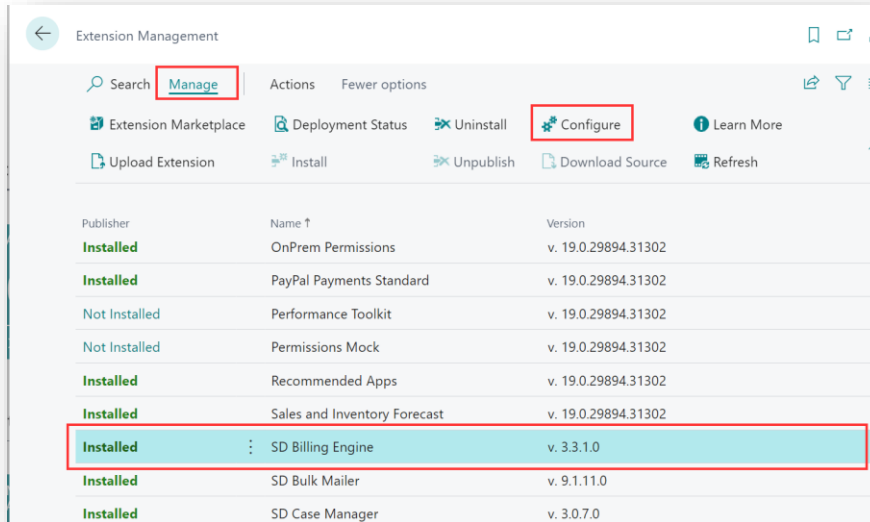


Figure 4-4

4. Choose to allow the **Allow HttpClient Requests** option (Figure 4-5).

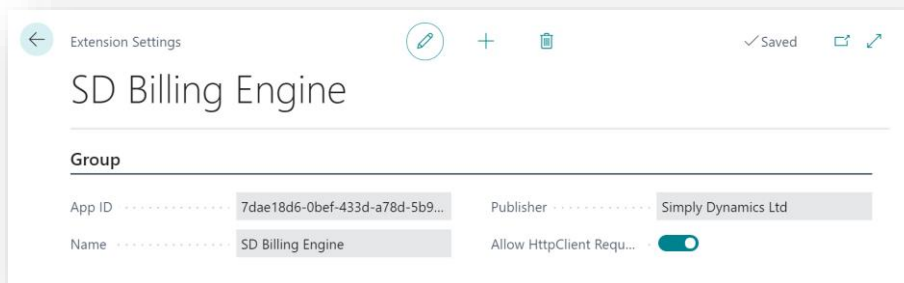


Figure 4-5

## 4.2 Choosing the SD Billing Engine Role

1. From your Dynamics 365 Business Central Web Client, in the app bar, select the **Settings** icon and then select **My Settings** (Figure 4-6).

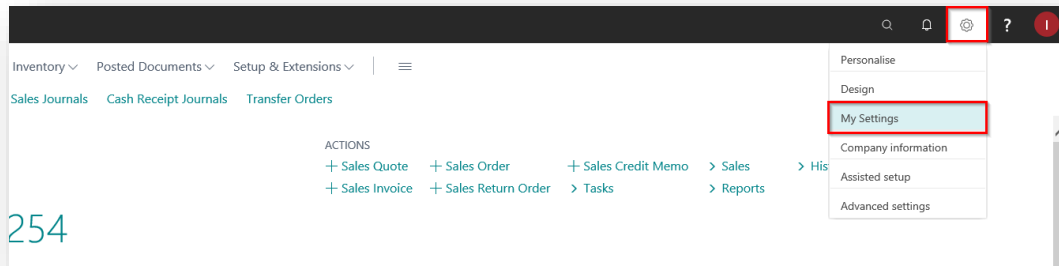


Figure 4-6

2. In the **My Settings** page, on the **Role** field, select the **AssistEdit** icon (Figure 4-7).

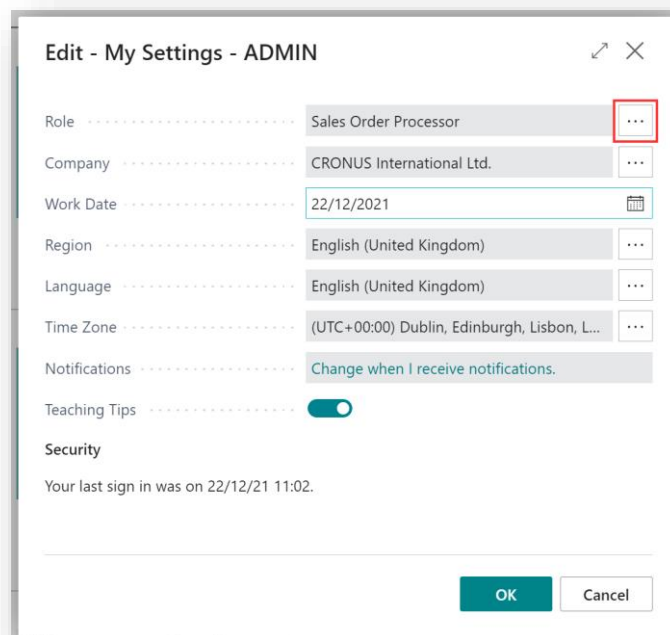


Figure 4-7

3. You should see **SD Billing Engine** in the list of Roles (Figure 4-8).



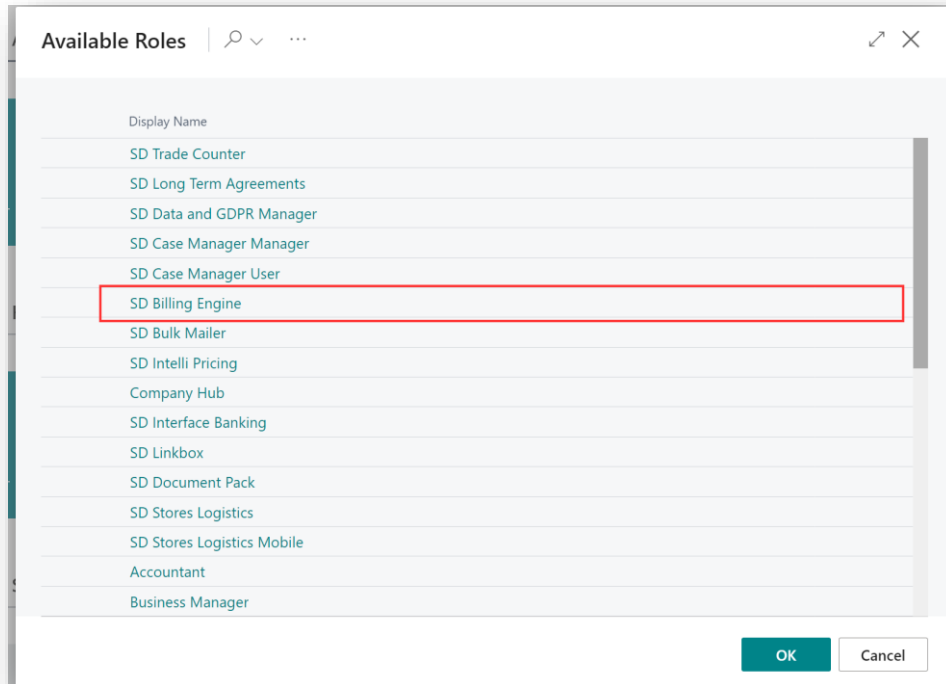


Figure 4-8

4. Choose **SD Billing Engine** and click **OK**.
5. The **SD Billing Engine** role should now be displayed in the **Role** field (Figure 4-9).

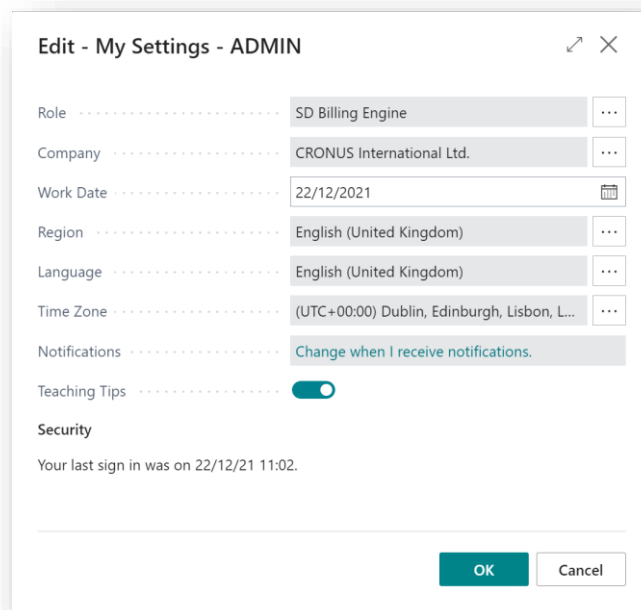


Figure 4-9

### 4.3 Accessing the SD Billing Engine Pages

Use the **Tell Me** to search for SD Billing Engine pages. Begin typing **SD** or **Billing** to see a list of the SD Billing Engine pages (*Figure 4-10*).

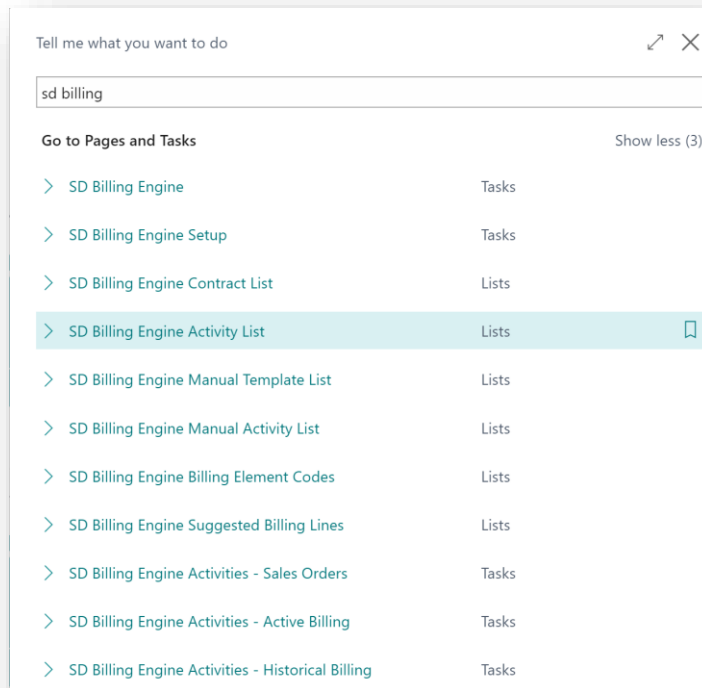


Figure 4-10

## 4.4 Activating the SD Billing Engine Licence

To use SD Billing Engine, you must activate the licence.

1. From the Tell Me, search for and select the **SD Billing Engine Setup** page.
2. You will be prompted that “Your SD Billing Engine license needs to be validated.” Choose **Yes** (Figure 4-11).

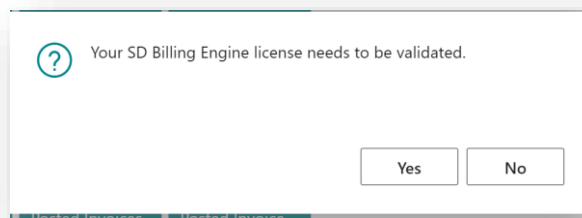


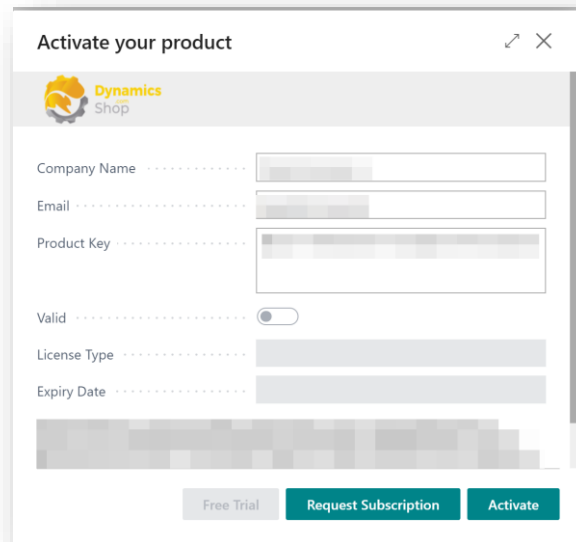
Figure 4-11

3. You will then see the **Activate your product** page.

### 4.4.1 Activating the SD Billing Engine Licence with a Product Key

In the **Activate your product** page:

1. Enter your company name in **Company Name**.
2. Enter your company email in **Email**.
3. Paste the supplied product key into the **Product Key** field. **Tab off the Product Key field to validate the contents of the field and to enable the Activate key.** Choose **Activate** (Figure 4-12).



Activate your product

Dynamics Shop

Company Name

Email

Product Key

Valid

License Type

Expiry Date

Free Trial Request Subscription Activate

Figure 4-12

4. The **Activate your product** page will update to display a message that the activation was successful. The expiry date will depend on the date that you activated your free trial.

#### 4.4.2 Activating the SD Billing Engine Licence with a Free Trial

If you have not received a Product Key from Simply Dynamics Ltd. and want to avail of a free trial in the **Activate your product** page:

1. Enter your company name in **Company Name**.
2. Enter your company email value in **Email**.
3. Choose **Free Trial** (Figure 4-13).

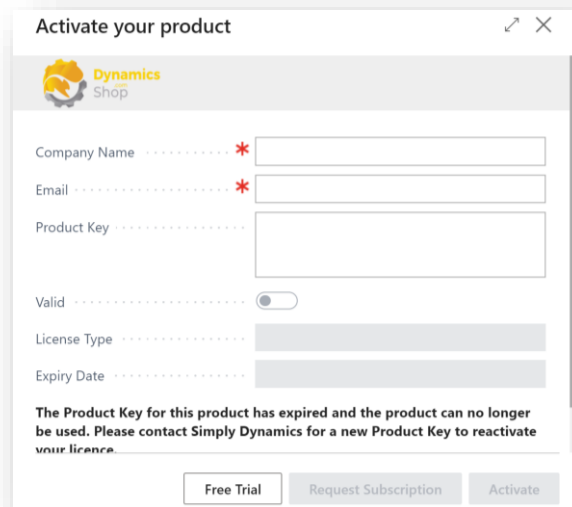


Figure 4-13

4. You are then prompted to choose **Yes** to activate your free trial (Figure 4-14). Choose **Yes**.

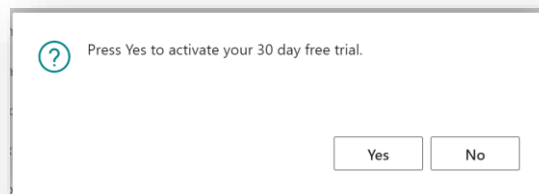
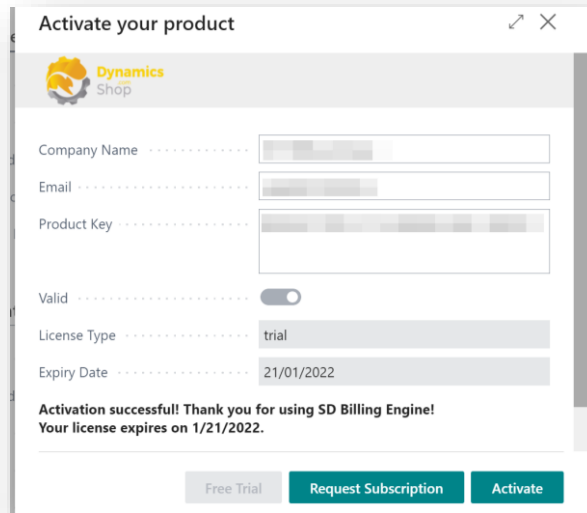


Figure 4-14

5. The **Activate your product** page will update to display a message that the activation was successful. The expiry date will depend on the date that you activated your free trial (Figure 4-15).



Activate your product

Dynamics Shop

Company Name

Email

Product Key

Valid

License Type trial

Expiry Date 21/01/2022

Activation successful! Thank you for using SD Billing Engine!  
Your license expires on 1/21/2022.

Free Trial Request Subscription Activate

Figure 4-15

6. Choose **Finish** to exit the page.
7. When your Free Trial has expired, choose **Request Subscription** to request a Product Key from Simply Dynamics.

## 5 Uninstalling SD Billing Engine

You can uninstall **SD Billing Engine** using the Web Client:

1. Open your Dynamics 365 Business Central Web Client and use the **Tell Me** to search for **Extension Management** (Figure 5-1).

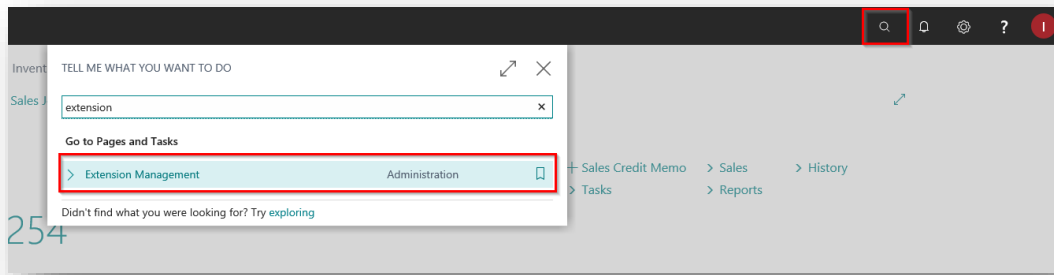


Figure 5-1

2. In **Extension Management**, you should see the **SD Billing Engine** App installed.
3. Select the **SD Billing Engine** App and choose the **Uninstall** Action (Figure 5-2).

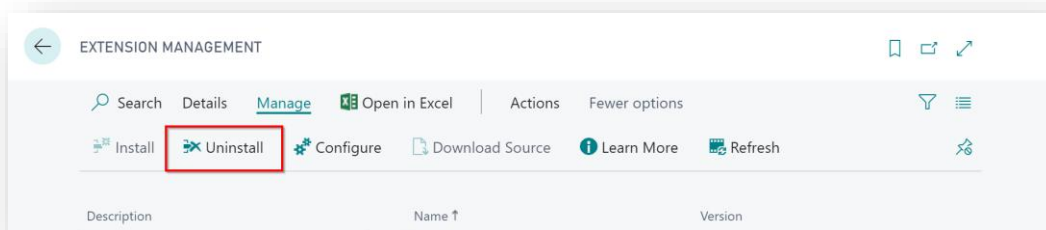


Figure 5-2

## 6 Setup and Configuration

### 6.1 SD Billing Engine Assisted Setup Wizard

You can easily setup SD Billing Engine using the **Assisted Setup** Action on the **SD Billing Engine Setup** page.

1. From the action bar choose the **Process** group, and then **Assisted Setup** (*Figure 6-1*).

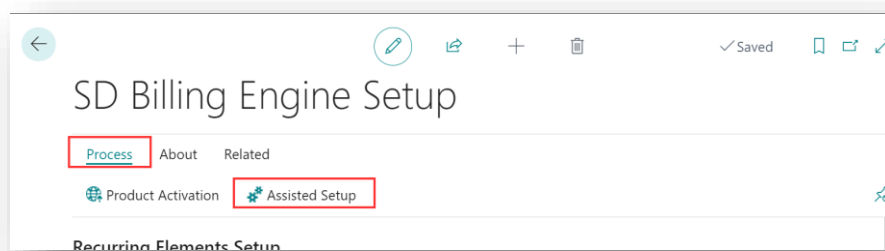


Figure 6-1

2. The **Assisted Setup Wizard** is displayed and guides you through set up. Choose **Next** (*Figure 6-2*).

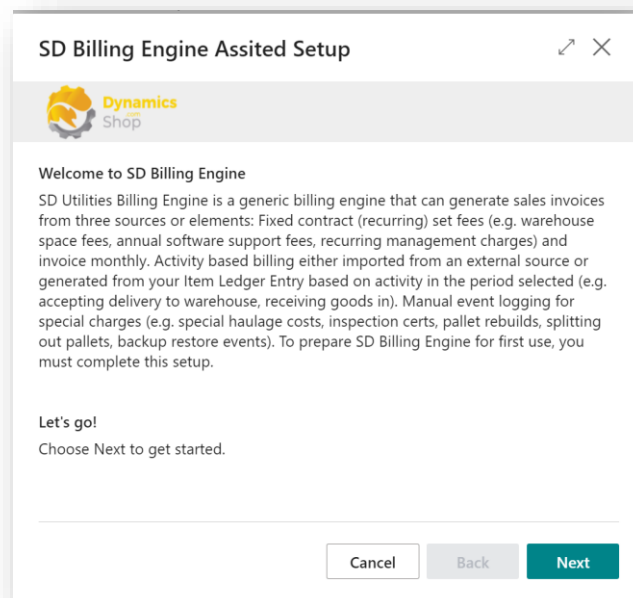
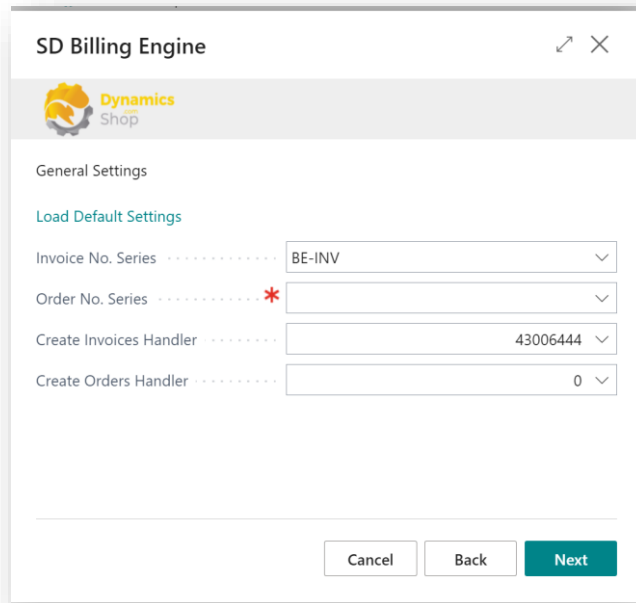


Figure 6-2



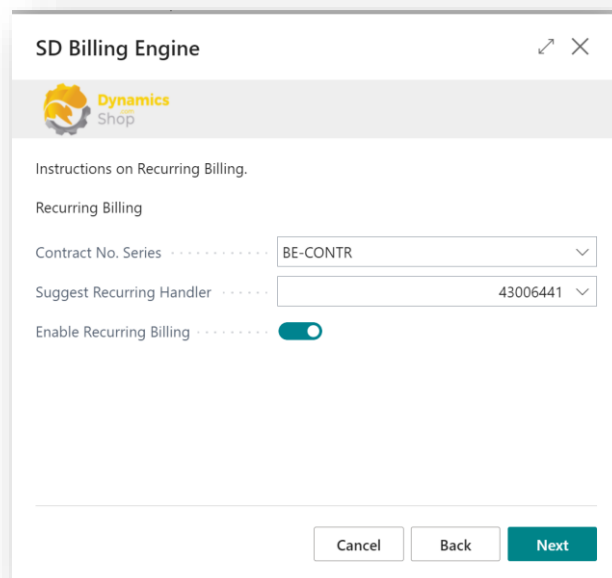
3. Choose the **No. Series** that will be used to generate Sales Invoices in SD Billing Engine. The **Create Invoices Handler** defaults to the Codeunit. If you want to import sample Billing Codes, select **Load Default Settings**. Choose **Next** (Figure 6-3).



The screenshot shows the 'SD Billing Engine' dialog box with the 'Load Default Settings' section selected. The 'Invoice No. Series' is set to 'BE-INV'. The 'Order No. Series' field is empty and has a red asterisk next to it. The 'Create Invoices Handler' is set to '43006444' and the 'Create Orders Handler' is set to '0'. At the bottom, there are 'Cancel', 'Back', and 'Next' buttons.

Figure 6-3

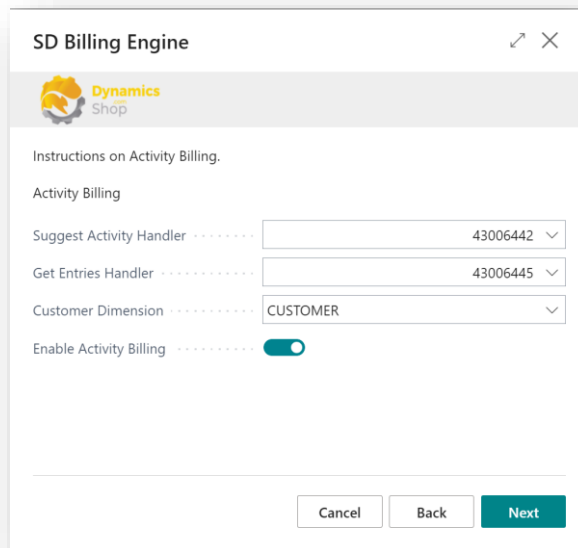
4. Choose the **No. Series** that will be used when creating the Contracts in SD Billing Engine. The **Suggest Recurring Handler** defaults to the Codeunit. Choose to **Enable Recurring Contracts** if you want to create Invoices based on Contracts. Choose **Next** (Figure 6-4).



The screenshot shows the 'SD Billing Engine' dialog box with the 'Recurring Billing' section selected. The 'Contract No. Series' is set to 'BE-CONTR'. The 'Suggest Recurring Handler' is set to '43006441'. The 'Enable Recurring Billing' toggle switch is turned on. At the bottom, there are 'Cancel', 'Back', and 'Next' buttons.

Figure 6-4

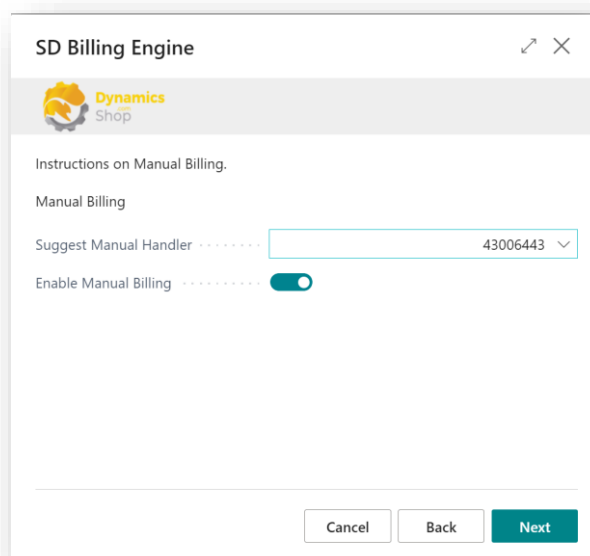
5. Choose the **Customer Dimension** to from your existing global dimensions. This field allows SD Billing Engine to determine which customer should be billed for the item ledger entry transaction. The values of the dimension chosen for this customer dimension field must be populated with Customer No. The **Suggest Activity Handler** and the **Get Entries Handler** defaults to the Codeunit. Choose to **Enable Activity Billing** if you want to create Invoices based on activities. Choose **Next** (Figure 6-5).



The screenshot shows the 'SD Billing Engine' dialog box with the 'Activity Billing' section. It includes a header with the Dynamics Shop logo and the text 'Instructions on Activity Billing.' Below this, there are four fields: 'Suggest Activity Handler' with a dropdown menu showing '43006442', 'Get Entries Handler' with a dropdown menu showing '43006445', 'Customer Dimension' with a dropdown menu showing 'CUSTOMER', and 'Enable Activity Billing' with a toggle switch that is turned on. At the bottom, there are three buttons: 'Cancel', 'Back', and 'Next'.

Figure 6-5

6. The **Suggest Manual Handler** defaults to the Codeunit. Choose to **Enable Manual Billing** if you want to create Invoices based on Manual entries. Choose **Next** (Figure 6-6).



The screenshot shows the 'SD Billing Engine' dialog box with the 'Manual Billing' section. It includes a header with the Dynamics Shop logo and the text 'Instructions on Manual Billing.' Below this, there are two fields: 'Suggest Manual Handler' with a dropdown menu showing '43006443' and 'Enable Manual Billing' with a toggle switch that is turned on. At the bottom, there are three buttons: 'Cancel', 'Back', and 'Next'.

Figure 6-6

7. Choose **Finish** (Figure 6-7).

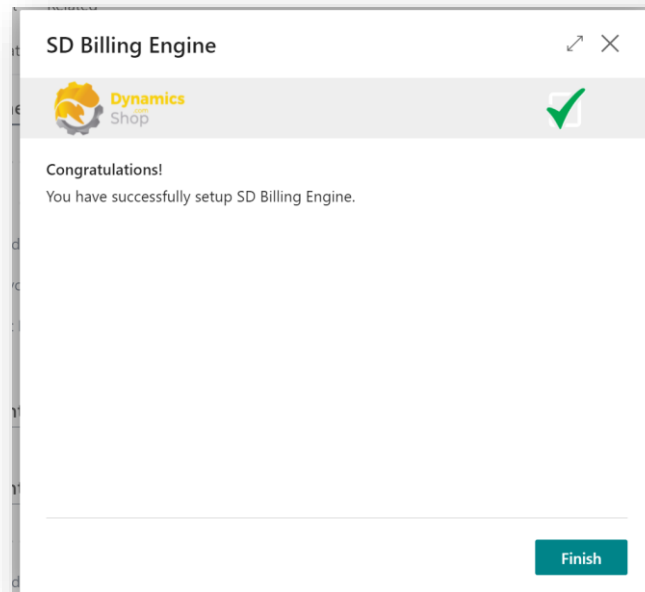


Figure 6-7

## 7 Understanding SD Billing Engine Concepts

SD Billing Engine is a generic billing engine that can generate sales invoices from three sources or elements:

- Recurring contract setups with fixed recurring charges linked to a customer.
- Activity based entries either generated in Microsoft Dynamics 365 Business Central linked to the item ledger entry, or, imported into Microsoft Dynamics 365 Business Central.
- Manual entries which are items and events logged by users.

Using SD Billing Engine, you can bill:

- Fixed contract (recurring) set fees and invoice monthly. For example, warehouse space fees, annual software support fees, recurring management charges.
- Activity based billing either imported from an external source, or, generated from your item ledger entry based on activity in the period selected. For example, accepting delivery to a warehouse, receiving goods in.
- Manual event logging for special charges. For example, special haulage costs, inspection certs, pallet rebuilds, splitting out pallets, backup restore events.

**Note: The activities that you are billing in the item ledger entry are billed on behalf of a third-party customer. You are billing the third-party customer, not the customer or vendor on the item ledger entry source line.**

**The item defines who you are billing, not the vendor or the customer. The item is unique to the customer. Each item for which the transaction is billable should be stamped with a customer dimension (Customer No.). Any item that you do not want to bill, can be left unstamped. Items of type service are ignored for activity-based billing.**

## 8 Using SD Billing Engine

### 8.1 Setup Card

In the **SD Billing Engine Setup** page, expand the **Recurring Elements Setup** FastTab (Figure 8-1):

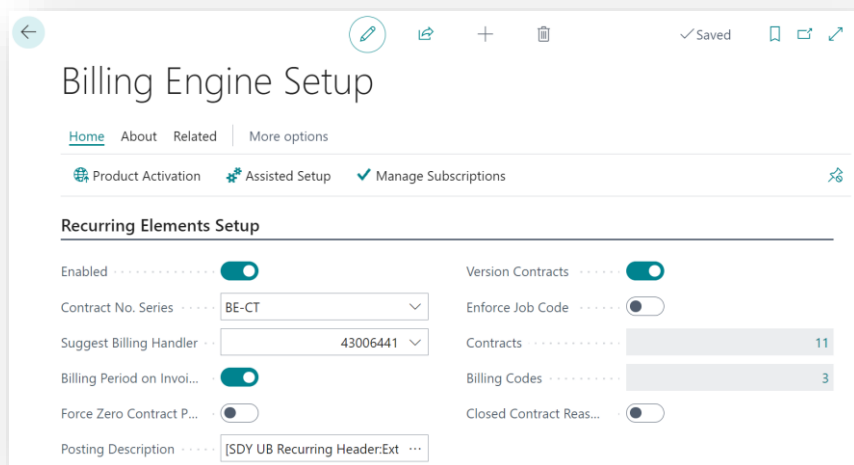


Figure 8-1

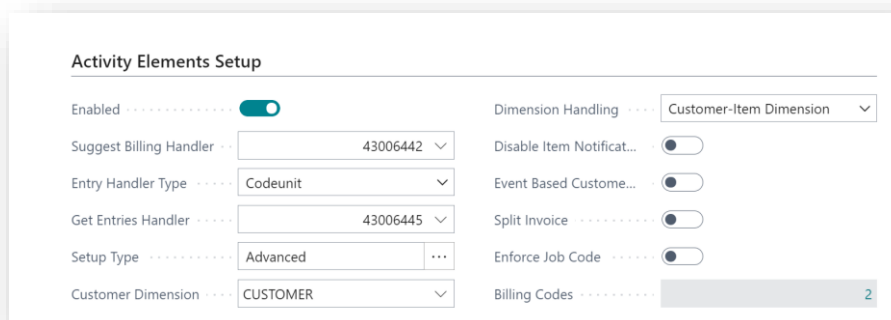
- **Enabled** – Select this checkbox to use the recurring elements billing functionality in SD Billing Engine.

The recurring based billing functionality is used to bill fixed contract (recurring) set fees linked to a customer and invoiced monthly. For example, warehouse space fees, annual software support fees, recurring management charges.

- **Contract No. Series** – Enter the number series to use when creating the recurring contracts.
- **Suggest Billing Handler** – Enter the ID of the Codeunit that contains the logic to use when suggesting and calculating recurring billing.
- **Billing Period on Invoice** – Select this option to stamp the billing period on the invoices created for the recurring contracts.
- **Force Zero Contract Price** – Select this option so that when a zero price is entered on the contract line, SD Billing Engine will use the zero price on the contract line when suggesting billing lines rather than using the standard find best price functionality for the item on the contract line.

- **Posting Description** – Enter a description to default into the Posting Description when a Recurring Contract is created. You can use place holder fields to build the description by choosing the ellipses on the field.
- **Version Contracts** – Select this option to track contract changes through different versions of the contract. The contract version is archived when moving from **New** to **Live**.
- **Enforce Job Code** – Choose this option to prompt users that a job code must be entered on creation of the contract line. When the Generate Invoices are run for the recurring elements, SD Billing Engine again prompts the user if a job code does not exist on the contract line. The invoices are created irrespective of whether the job code is entered or not.
- **Contracts** – Displays a flowfield count of the recurring contracts that are setup in SD Billing Engine.
- **Billing Codes** - Displays a flowfield count of the billing codes, of Billing Type Recurring, which have been setup in SD Billing Engine.
- **Closed Contract Reason Code** – Select this option if you want users to enter a reason code when closing a contract.

The **Activity Elements Setup** FastTab contains the following fields when an **Activity Setup Type** of **Advanced** is selected (*Figure 8-2*):



Activity Elements Setup	
Enabled	<input checked="" type="checkbox"/>
Suggest Billing Handler	43006442
Entry Handler Type	Codeunit
Get Entries Handler	43006445
Setup Type	Advanced
Customer Dimension	CUSTOMER
Dimension Handling	Customer-Item Dimension
Disable Item Notificat...	<input type="checkbox"/>
Event Based Custome...	<input type="checkbox"/>
Split Invoice	<input type="checkbox"/>
Enforce Job Code	<input checked="" type="checkbox"/>
Billing Codes	2

*Figure 8-2*

- **Enabled** – Select this checkbox to use the activity elements billing functionality in SD Billing Engine.

The activity-based billing functionality is used to bill entries imported from an external source or generated from your Item Ledger Entry based on activity in the period selected (e.g., accepting delivery to warehouse, receiving goods in).

- 
- **Suggest Billing Handler** - Enter the ID of the Codeunit that contains the logic to use when calculating activity-based billing.
  - **Entry Handler Type** - Select the handler type to use to get the activity entries that will be billed. Options are **Codeunit** or **XMLport**.
  - **Get Entries Handler** – Enter the ID for the Codeunit or XMLport that contains the logic used to get the activity entries for the activity elements billing.
  - **Setup Type** – Choose the setup type to use to define the activity element setup. Options are **Simplified** or **Advanced**. To define the billing code mapping click the **Assist Edit** to the right of this field.

**Simplified** – This option allows the user to define a single billing code for an item ledger entry type.

**Advanced** – This option allows multiple billing codes to be used against multiple item ledger entry types.

- **Customer Dimension** – Choose the dimension to use as the customer dimension from your existing global dimensions. This customer dimension field allows SD Billing Engine to determine which customer should be billed for the item ledger entry transaction. The values of the dimension chosen for this customer dimension field must be populated with customer numbers.

**Note:** The activities that you are billing in the Item Ledger Entry are billed on behalf of a third-party customer. You are billing the third-party customer, not the actual customer or vendor on the item ledger entry source line. The item, not the vendor or the customer, defines who you are billing. The item is unique to the customer. Each item for which the transaction is billable should be stamped with a customer dimension (with a value of a customer no. from the customer card). Any item that you do not want to bill, can be left unstamped. Items of type service are ignored for activity-based billing.

- **Dimension Handling** – Choose the value for the dimension handling. Options are **Customer-Item Dimension** or **Dimension Set ID**.

**Customer-Item Dimension** – With this option SD Billing Engine matches item ledger entry lines with the customers to bill by searching for the customer dimension value

in the Item's dimensions. This option limits an item to be assigned to a single customer. With this option you map one item to a specific customer.

**Dimension Set ID** – With this option SD Billing Engine searches for the customer to bill by matching the Item Ledger Entry Dimension Set ID value with the value entered in **Customer Dimension**. With this option, you need to specify the Dimension Set ID on the document header when posting for SD Billing Engine to interrogate the Item Ledger Entry.

- **Disable Item Notifications** – When running the Get Entries action from the **Activity Lines** page, the system will notify the user when a billable item ledger entry record is detected without a customer dimension assigned to the item (i.e., when an item ledger entry cannot be matched with a customer). Select this option to hide these notifications.
- **Event Based Customer Dimension Update** – Select this checkbox to add the customer to the customer dimension field whenever a new customer is created or renamed.

**Note:** To manually link the item with the customer no., you then stamp the item with the correct customer dimension.

- **Split Invoice** – Select this checkbox to generate a separate invoice for the customer when billing for activity based and manual based elements.
- **Enforce Job Code** – Choose this option to prompt users that a job code must be entered on creation of the activity line.

When the Generate Invoices are run for the activity lines, SD Billing Engine again prompts the user if a job code does not exist on the activity line. The invoices are created irrespective of whether the job code is entered or not.

- **Billing Codes** – Displays a flowfield count of the Billing Element Codes setup in the in SD Billing Engine that are of Billing Type Activity.



When an **Activity Setup Type** of **Advanced** is selected, the **Activity Elements Setup** FastTab is displayed and contains the following additional fields. Use the **Assist Edit** on the **Setup Type** to setup your billing code mappings (*Figure 8-3*):

Edit - SD Billing Engine Activity Advanced Setup

Search + New Edit List Delete Copy Configuration Open in Excel

Code	Customer ↑	Enabl...	Customer Name	Billing Code	Billing Description	Type	Sub-Type	Locati...
→ DEF SHIP	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES PICK	Sales Pick	Item Ledger	Shipment	
INV CHARGE	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES SHIP	Sales Shipment	Item Ledger	Shipment	
LABEL	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES PICK	Sales Pick	Item Ledger	Pick	
PALLET COUNT	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES SHIP	Sales Shipment	Item Ledger	Putaway	
DEF SHIP	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES PICK	Sales Pick	Item Ledger	Shipment	
INV CHARGE	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES SHIP	Sales Shipment	Item Ledger	Shipment	
LABEL	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES PICK	Sales Pick	Item Ledger	Pick	
PALLET COUNT	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES SHIP	Sales Shipment	Item Ledger	Putaway	

Figure 8-3

The **Activity Elements Setup** FastTab contains the following additional fields when an **Activity Setup Type** of **Simplified** is selected. Use the **Assist Edit** on the **Setup Type** to setup these billing code mappings (*Figure 8-4*):

Edit - Billing Code Mapping

Purchase Receipt .....

Purch. Putaway .....

Sales Shipment ..... SALES PICK

Sales Pick ..... SALES SHIP

Transfer Shipment .....

Transfer Receipt .....

Assembly .....

Bin Count .....

OK Cancel

Figure 8-4

For each of these fields above you must specify a Billing Code that relates to the corresponding Item Ledger Entry Type. If left empty, the Item Ledger Entry Type will be ignored when generating Activity Lines.

- **Purchase Receipt** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type (*Figure 8-5*). This field denotes an Entry Type of Purchase and is registered once per document.

Entry No.	Item No.	Posting Date	Entry Type	Source No.	Document No.	Description	Location Code	Quantity	Remaining Quantity
129	1964-S	04/01/2021	Purchase	20000	107017		GREEN	14	14
131	1964-W	06/01/2021	Purchase	10000	107018		GREEN	15	15
132	1964-W	06/01/2021	Purchase	10000	107018		BLUE	25	21
147	70060	09/01/2021	Purchase	10000	107019		RED	250	249
148	70060	09/01/2021	Purchase	10000	107019		BLUE	500	500
149	70011	09/01/2021	Purchase	10000	107019		BLUE	52	52

Figure 8-5

- **Purch. Putaway** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type (*Figure 8-6*). This field denotes an Entry Type of Purchase and is registered once per document line.

Entry No.	Item No.	Posting Date	Entry Type	Source No.	Document No.	Description	Location Code	Quantity	Remaining Quantity
129	1964-S	04/01/2021	Purchase	20000	107017		GREEN	14	14
131	1964-W	06/01/2021	Purchase	10000	107018		GREEN	15	15
132	1964-W	06/01/2021	Purchase	10000	107018		BLUE	25	21
147	70060	09/01/2021	Purchase	10000	107019		RED	250	249
148	70060	09/01/2021	Purchase	10000	107019		BLUE	500	500
149	70011	09/01/2021	Purchase	10000	107019		BLUE	52	52

Figure 8-6

- **Sales Shipment** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type (*Figure 8-7*). This field denotes an Entry Type of Sale and is registered once per document.

Entry No.	Item No.	Posting Date	Entry Type	Source No.	Document No.	Description	Location Code	Quantity	Remaining Quantity
170	1996-S	15/01/2021	Sale	43687129	102019		GREEN	-1	-1
171	1896-S	16/01/2021	Sale	49633663	102020		RED	-1	0
172	1906-S	16/01/2021	Sale	49633663	102020		RED	-1	0
174	1968-S	17/01/2021	Sale	32656565	102021		RED	-1	0
175	1960-S	17/01/2021	Sale	32656565	102021		RED	-2	0
176	1976-W	17/01/2021	Sale	32656565	102021		RED	-2	-2
177	1928-S	17/01/2021	Sale	20000	102022		GREEN	-5	-5

Figure 8-7

- **Sales Pick** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type (*Figure 8-8*). This field denotes an Entry Type of Sale and is registered once per document line.

Entry No.	Item No.	Posting Date	Entry Type	Source No.	Document No.	Description	Location Code	Quantity	Remaining Quantity
170	1996-S	15/01/2021	Sale	43687129	102019		GREEN	-1	-1
171	1896-S	16/01/2021	Sale	49633663	102020		RED	-1	0
172	1906-S	16/01/2021	Sale	49633663	102020		RED	-1	0
174	1968-S	17/01/2021	Sale	32656565	102021		RED	-1	0
175	1960-S	17/01/2021	Sale	32656565	102021		RED	-2	0
176	1976-W	17/01/2021	Sale	32656565	102021		RED	-2	-2
177	1928-S	17/01/2021	Sale	20000	102022		GREEN	-5	-5

Figure 8-8

- **Transfer Shipment** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type (*Figure 8-9*). This field denotes an Entry Type of Transfer (Shipment negative entries) and is registered once per document.

Entry No.	Item No.	Posting Date	Entry Type	Source No.	Document No.	Description	Location Code	Quantity	Remaining Quantity
247	1908-S	28/01/2021	Transfer		109001		OWN LOG.	-10	0
248	1908-S	28/01/2021	Transfer		109001		RED	10	10
249	1936-S	28/01/2021	Transfer		109001		OWN LOG.	-4	0
250	1936-S	28/01/2021	Transfer		109001		RED	4	4
256	70001	01/01/2020	Transfer		109002		OUT. LOG.	-15	0
257	70001	01/01/2020	Transfer		109002		YELLOW	15	15
258	70002	01/01/2020	Transfer		109002		OUT. LOG.	-3	0
259	70002	01/01/2020	Transfer		109002		YELLOW	3	3
260	70003	01/01/2020	Transfer		109002		OUT. LOG.	-31	0
261	70003	01/01/2020	Transfer		109002		YELLOW	31	31
262	1906-S	28/01/2021	Transfer		108003		GREEN	-40	0

Figure 8-9

- **Transfer Receipt** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type (*Figure 8-10*). This field denotes an Entry Type of Transfer (Receipt positive entries) and is registered once per document.

Entry No.	Item No.	Posting Date	Entry Type	Source No.	Document No.	Description	Location Code	Quantity	Remaining Quantity
247	1908-S	28/01/2021	Transfer		109001		OWN LOG.	-10	0
248	1908-S	28/01/2021	Transfer		109001		RED	10	10
249	1936-S	28/01/2021	Transfer		109001		OWN LOG.	-4	0
250	1936-S	28/01/2021	Transfer		109001		RED	4	4
256	70001	01/01/2020	Transfer		109002		OUT. LOG.	-15	0
257	70001	01/01/2020	Transfer		109002		YELLOW	15	15
258	70002	01/01/2020	Transfer		109002		OUT. LOG.	-3	0
259	70002	01/01/2020	Transfer		109002		YELLOW	3	3
260	70003	01/01/2020	Transfer		109002		OUT. LOG.	-31	0
261	70003	01/01/2020	Transfer		109002		YELLOW	31	31
262	1906-S	28/01/2021	Transfer		108003		GREEN	-40	0

Figure 8-10

- **Assembly** – Enter a Billing Code to relate to the corresponding Item Ledger Entry Type.

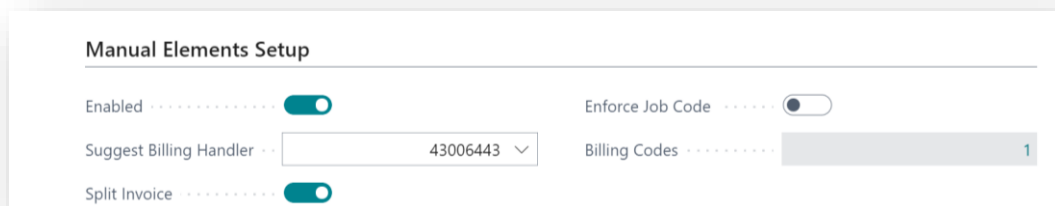
This field denotes an Entry Type of Assembly Output and is registered once per document, per line.

- **Bin Count**– Enter a Billing Code to relate to the corresponding Item Ledger Entry Type.

Counts the greatest number of bins used in a day over a given period, the period is defined on the Get Entries Request page (Start Date and End Date). The result is split by customer.

**Note: Purchase Returns and Sales Return Shipments are not handled by enquiring on the Item Ledger Entry but can be logged as a Manual task.**

The **Manual Elements Setup** FastTab contains the following fields (*Figure 8-11*):



Manual Elements Setup

Enabled       Enforce Job Code

Suggest Billing Handler       Billing Codes

Split Invoice

*Figure 8-11*

- **Enabled** – Select this checkbox to use the manual elements billing functionality in SD Billing Engine.

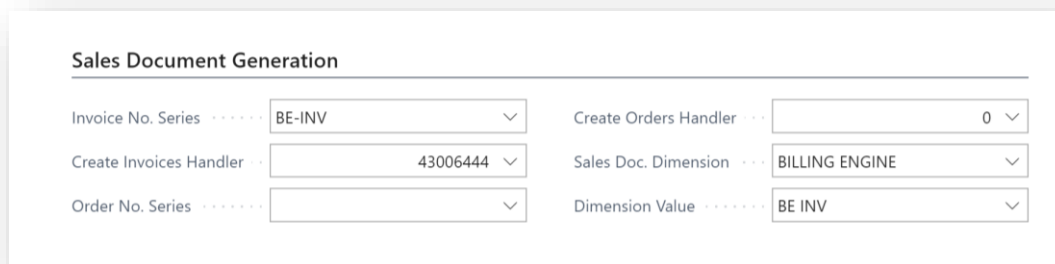
The manual-based billing functionality is used to bill entries for manually logged items and events, logged by users for charges (e.g., special haulage costs, inspection certs, pallet rebuilds, splitting out pallets, backup restore events).

- **Suggest Billing Handler** - Enter the ID of the Codeunit that contains the logic to use when creating and calculating manual-based billing.
- **Split Invoice** – Select this checkbox to generate a separate invoice for the customer when billing for activity based and manual based elements.
- **Enforce Job Code** – Choose this option to prompt users that a job code must be entered on creation of the manual line if a job code does not exist on the line.

When the Generate Invoices are run for the manual elements, SD Billing Engine again prompts the user if a job code does not exist on the manual line. The invoices are created irrespective of whether the job code is entered or not.

- **Billing Codes** – Displays a flowfield count of the Billing Element Codes, of Billing Type Manual, which are setup in in SD Utilities Billing Engine.

The **Sales Document Generation** FastTab contains the following fields (*Figure 8-12*)



Sales Document Generation	
Invoice No. Series	BE-INV
Create Invoices Handler	43006444
Order No. Series	
Create Orders Handler	0
Sales Doc. Dimension	BILLING ENGINE
Dimension Value	BE INV

Figure 8-12

- **Invoice No. Series** – Enter the number series to use for invoices generated from SD Billing Engine.
- **Create Invoices Handler** - Enter the ID of the Codeunit that contains the logic to use when SD Billing Engine creates the invoices for recurring, manual and/or activity-based billing.
- **Order No. Series** – Enter the number series to use for sales orders generated by SD Billing Engine.
- **Create Orders Handler** - Enter the ID of the Codeunit that contains the logic to use to create orders that have been inserted into order staging tables from an outside/external source.
- **Sales Doc. Dimension** – Choose a specific dimension that will be stamped on every sales document header generated by SD Billing Engine.
- **Dimension Value** - Choose a specific dimension value that will be stamped to every sales document header generated by SD Billing Engine.

The **SD Billing Engine Setup** contains the following actions on the action bar in the **Related** group (Figure 8-13):

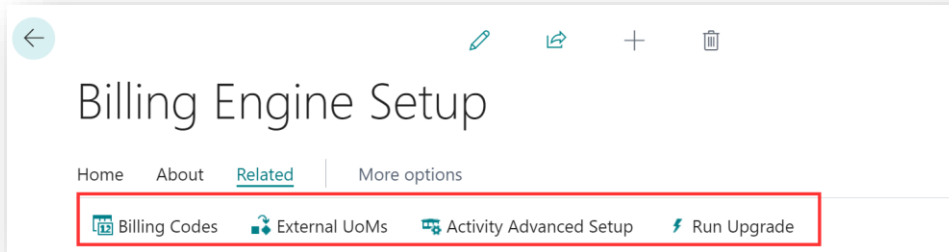


Figure 8-13

- **Billing Codes** - Choose this action to set up billing codes in SD Billing Engine.
- **External UoMs** – Choose this action to define the External Units of Measure to map to the Units of Measure in your database. These External Units of Measure are needed when importing activity-based entries from an external source.
- **Activity Advanced Setup** – Chose this action to define the advanced activity setup if you have specified an **Activity Setup Type** of **Advanced** in the **Activity Elements Setup** FastTab.
- **Run Contract Tracker Upgrade** – On **upgrading to version 5.0.0 of SD Billing Engine**, detailed Contract Tracking entries are created from existing details in the Contract Versions. An action to build the Contract Tracker Detail table is surfaced on the SD Billing Engine Setup card. This action calls upgrade code which creates a new version of all existing Contracts; builds the Contract Tracker Detail table; updates Creation records in Contract Header to increase; updates Removal records in Contract Header to decrease; and sets an Upgrade Boolean field on the Billing Engine Setup table to false.

## 8.2 Billing Codes

The **SD Billing Engine Billing Element Codes** list, accessed from the **SD Billing Engine Setup Card** (Figure 8-14), or, by searching the Tell Me, allows you to define billable tasks. Each billing code is defined for a particular individual billing task and type.

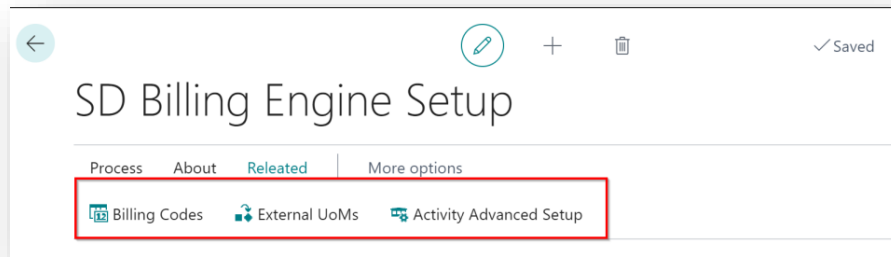
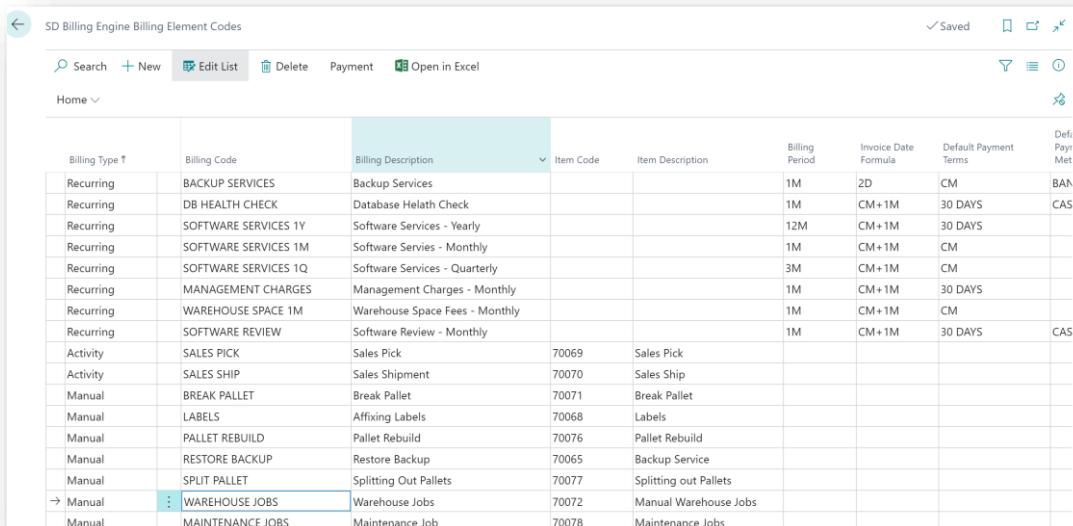


Figure 8-14

For **Billing Type Manual** and **Activity**, you define the billable tasks and link the billable tasks with an **Item No.** You can filter down to link the billable tasks to items of **Type Service** by defining an Item Category on the Billing Code lines. For **Billing Type Recurring**, billable items are defined on the contract lines.

The **SD Billing Engine Element Codes** list contains the following fields (Figure 8-15):



Billing Type ↑	Billing Code	Billing Description	Item Code	Item Description	Billing Period	Invoice Date Formula	Default Payment Terms	Def. Payr Met
Recurring	BACKUP SERVICES	Backup Services			1M	2D	CM	BAN
Recurring	DB HEALTH CHECK	Database Helath Check			1M	CM+1M	30 DAYS	CAS
Recurring	SOFTWARE SERVICES 1Y	Software Services - Yearly			12M	CM+1M	30 DAYS	
Recurring	SOFTWARE SERVICES 1M	Software Servies - Monthly			1M	CM+1M	CM	
Recurring	SOFTWARE SERVICES 1Q	Software Services - Quarterly			3M	CM+1M	CM	
Recurring	MANAGEMENT CHARGES	Management Charges - Monthly			1M	CM+1M	30 DAYS	
Recurring	WAREHOUSE SPACE 1M	Warehouse Space Fees - Monthly			1M	CM+1M	CM	
Recurring	SOFTWARE REVIEW	Software Review - Monthly			1M	CM+1M	30 DAYS	CAS
Activity	SALES PICK	Sales Pick	70069	Sales Pick				
Activity	SALES SHIP	Sales Shipment	70070	Sales Ship				
Manual	BREAK PALLET	Break Pallet	70071	Break Pallet				
Manual	LABELS	Affixing Labels	70068	Labels				
Manual	PALLET REBUILD	Pallet Rebuild	70076	Pallet Rebuild				
Manual	RESTORE BACKUP	Restore Backup	70065	Backup Service				
Manual	SPLIT PALLET	Splitting Out Pallets	70077	Splitting out Pallets				
→ Manual	WAREHOUSE JOBS	Warehouse Jobs	70072	Manual Warehouse Jobs				
Manual	MAINTENANCE JOBS	Maintenance Job	70078	Maintenance Jobs				

Figure 8-15

- **Billing Type** - Select the billing type for the billing code. Options are **Recurring**, **Activity** or **Manual**.

- 
- **Billing Code** – Enter a unique code for the billing element code.
  - **Billing Code Description** - Enter a user defined description for the billing code.
  - **Item Category** – Enter the item category that you want to limit the items to when entering items on the contract or adding items to billing codes of Billing Type Activity and Manual.
  - **Job Post. Grp Filter** – Choose the job posting group that you want to filter down the job codes to on the contract, activity, and manual lines.
  - **Item Code** – For a Billing Type of Activity or Manual, select the item code to link to the billing code.
  - **Item Description** – Displays the description of the item selected in **Item Code**.
  - **Billing Period** – For a Billing Type of Recurring, enter how often you want to bill e.g., 1M, 1Q etc.
  - **Invoice Date Formula** – For a Billing Type of Recurring, enter the date formula to use to calculate the next invoice billing period for the contract.

E.g., If **Billing Period** is 1M, and **Invoice Date Formula** is CM+1M, and the **Next Invoice Date** is today, then the next invoice billing period will be the first of next month up until the end of next month. This allows you issue an invoice for the service before the next billing period starts (i.e., you are billing ahead of providing the service).

Once the **Suggested Billing** has been run and the invoice generated, the system will update the **Next Invoice Date**, **Last Invoice Date** and **Billing Period** on the contract.

- **Default Payment Terms** – Enter the default payment terms to use as the default when creating the invoice for the billing code.
- **Default Payment Method** – Enter the default payment method to use as the default when creating the invoice for the billing code.
- **Default Payment Service** – Enter the default payment service to use, as per standard Microsoft Dynamics 365 Business Central.
- **Default Deferral Template Code** - – Enter the default deferral template code to use, as per standard Microsoft Dynamics 365 Business Central.



### 8.3 External Units of Measure

The **SD Billing Engine External Units of Measure** list, accessed from the **SD Billing Engine Setup Card** (Figure 8-16), or by searching the Tell Me, allows you to define the External Units of Measure to map to the units of measure in your Microsoft Dynamics 365 Business Central database. These external units of measure are required when importing activity-based entries from an external source.

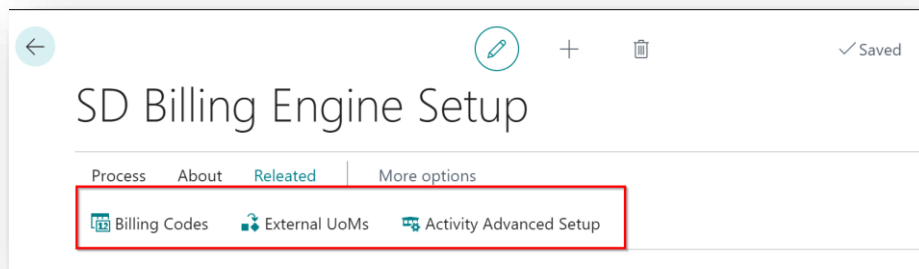
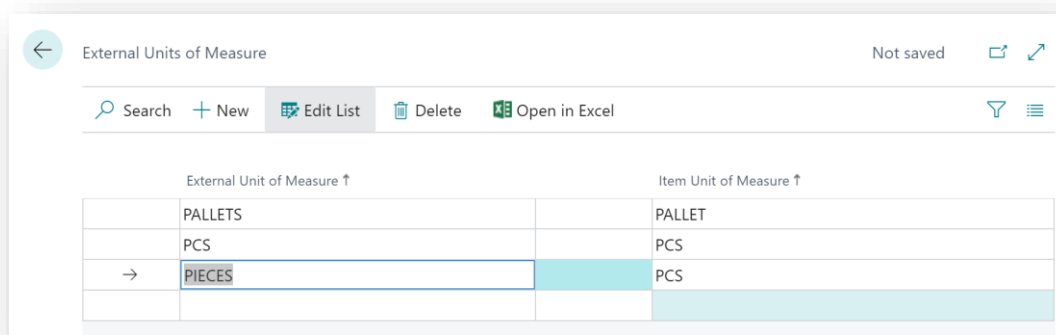


Figure 8-16

**Note:** You need to map the **External Unit of Measure** against the **Item Unit of Measure** even if they are identical codes.

The **SD-UB External Units of Measure** list contains the following fields (Figure 8-17):



External Unit of Measure ↑	Item Unit of Measure ↑
PALLETS	PALLET
PCS	PCS
→ PIECES	PCS

Figure 8-17

- **External Unit of Measure** – Enter a code to define the external unit of measure code.
- **Item Unit of Measure** – Enter the item unit of measure in your Microsoft Dynamics 365 Business Central database to map the external unit of measure to. Choose from a list of existing Units of Measure in your database.

## 8.4 Activity Advanced Setup

The **SD Billing Engine Activity Advanced Setup** page, accessed from the **SD Billing Engine Setup Card** (Figure 8-18), or by searching the Tell Me, allows you to define as many Billing Codes as you want per Item Ledger Entry Type.

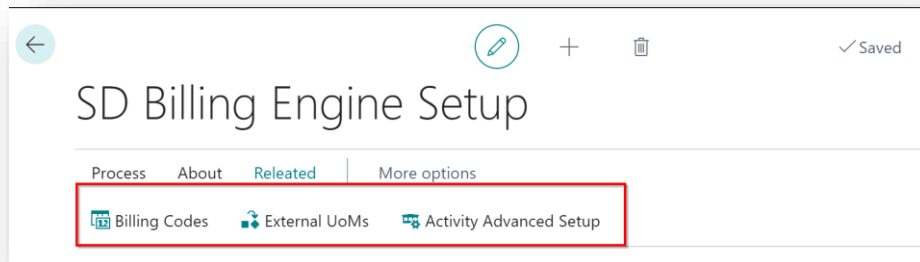
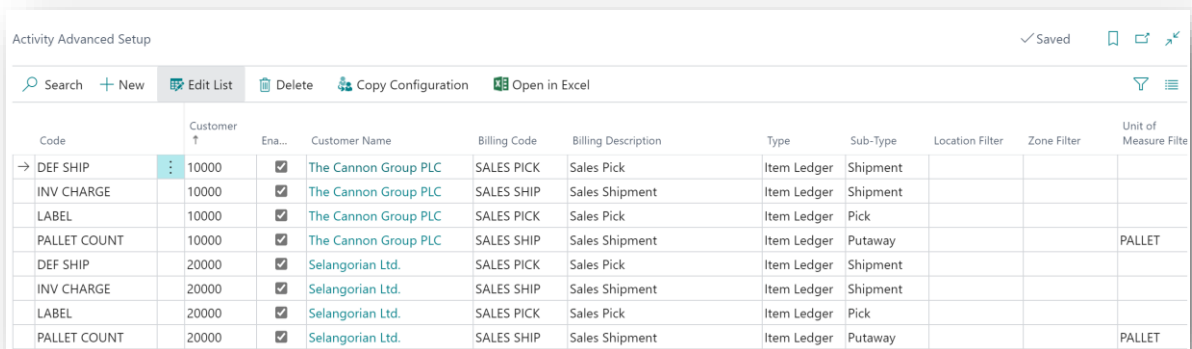


Figure 8-18

The **SD Billing Engine Activity Advanced Setup** page contains the following fields (Figure 8-19):



Code	Customer	Ena...	Customer Name	Billing Code	Billing Description	Type	Sub-Type	Location Filter	Zone Filter	Unit of Measure Filter
→ DEF SHIP	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES PICK	Sales Pick	Item Ledger	Shipment			
INV CHARGE	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES SHIP	Sales Shipment	Item Ledger	Shipment			
LABEL	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES PICK	Sales Pick	Item Ledger	Pick			
PALLET COUNT	10000	<input checked="" type="checkbox"/>	The Cannon Group PLC	SALES SHIP	Sales Shipment	Item Ledger	Putaway			PALLET
DEF SHIP	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES PICK	Sales Pick	Item Ledger	Shipment			
INV CHARGE	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES SHIP	Sales Shipment	Item Ledger	Shipment			
LABEL	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES PICK	Sales Pick	Item Ledger	Pick			
PALLET COUNT	20000	<input checked="" type="checkbox"/>	Selangorian Ltd.	SALES SHIP	Sales Shipment	Item Ledger	Putaway			PALLET

Figure 8-19

- **Code** - Enter a unique code to define the code for the Activity Advanced Setup Code.
- **Customer** – Select the customer to link to the Activity Advanced Setup Code.
- **Enabled** – Select the checkbox to enable the Activity Advanced Setup.
- **Customer Name** – Displays the name of the customer chosen in **Customer**.
- **Billing Code** – Select the billing code from a list of existing billing codes with a Billing Type of Activity.

- **Billing Description** – Displays the description of the billing code entered in **Billing Code**. The Billing Description can be updated here as the same billing codes can be used several different times for different purposes.
- **Type** – Select the type from a list. Options are **Item Ledger** or **Warehouse**.
- **Sub-Type** – Select the sub-type from a list. Options are **Receipt, Putaway, Shipment, Pick, Transfer Receipt, Transfer Putaway, Transfer Shipment, Transfer Pick, Assembly, or Storage**.

#### Item Ledger Sub-Types:

**Receipt** - This field denotes an Entry Type of Purchase and is registered once per document.

**Putaway** - This field denotes an Entry Type of Purchase and is registered once per document line.

**Shipment** - This field denotes an Entry Type of Sale and is registered once per document.

**Pick** - This field denotes an Entry Type of Sale and is registered once per document line.

**Transfer Receipt** - This field denotes an Entry Type of Transfer (Receipt positive entries) and is registered once per document.

**Transfer Putaway** - This field denotes an Entry Type of Transfer (Receipt positive entries) and is registered once per document, per line.

**Transfer Shipment** - This field denotes an Entry Type of Transfer (Shipment negative entries) and is registered once per document.

**Transfer Pick** - This field denotes an Entry Type of Transfer (Shipment negative entries) and is registered once per document, per line.

**Assembly** - This field denotes an Entry Type of Assembly Output and is registered once per document, per line.

### Warehouse Sub-Types:

**Storage** - Counts the greatest number of bins used in a day over a given period, the period is defined on the Get Entries Request page (Start Date and End Date). The result is split by customer.

- **Location Filter** – Select a location filter from a list of locations in your database.
- **Zone Filter** – Applicable only for **Type of Warehouse** and a **Sub Type of Storage**. Select a zone filter from a list of zones in your database.
- **Unit of Measure Filter** – For sub-type of **Putaway, Pick, Transfer Putaway, Transfer Shipment, Transfer Pick, Assembly, or Storage**, select a unit of measure filter from a list of units of measure in your database.

The **SD Billing Engine Activity Advanced Setup** page contains the following action on the **Home** tab of the ribbon (*Figure 8-20*):

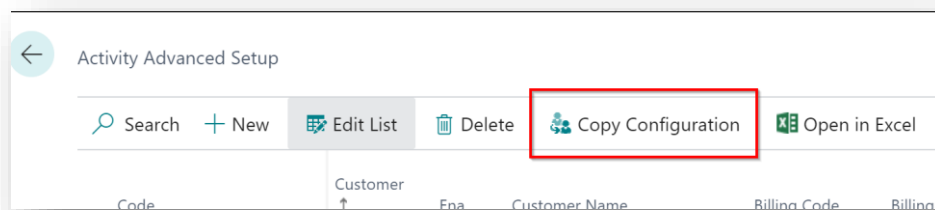


Figure 8-20

- **Copy Configuration** – Choose this Action to copy the definitions in the Advanced Setup for one customer to another customer. A new record is created in the Activity Advanced Setup for the specified customer.

## 8.5 Recurring Contracts List

The **SD Billing Engine Contract List**, accessed by searching the Tell Me, or by drilling through on the **Live Contracts** cue in the **SD Billing Engine Role Centre** (*Figure 8-21*), allows you to define fixed contract (recurring) set fees and charges and link to a customer (e.g., warehouse space fees, annual software support fees, recurring management charges).

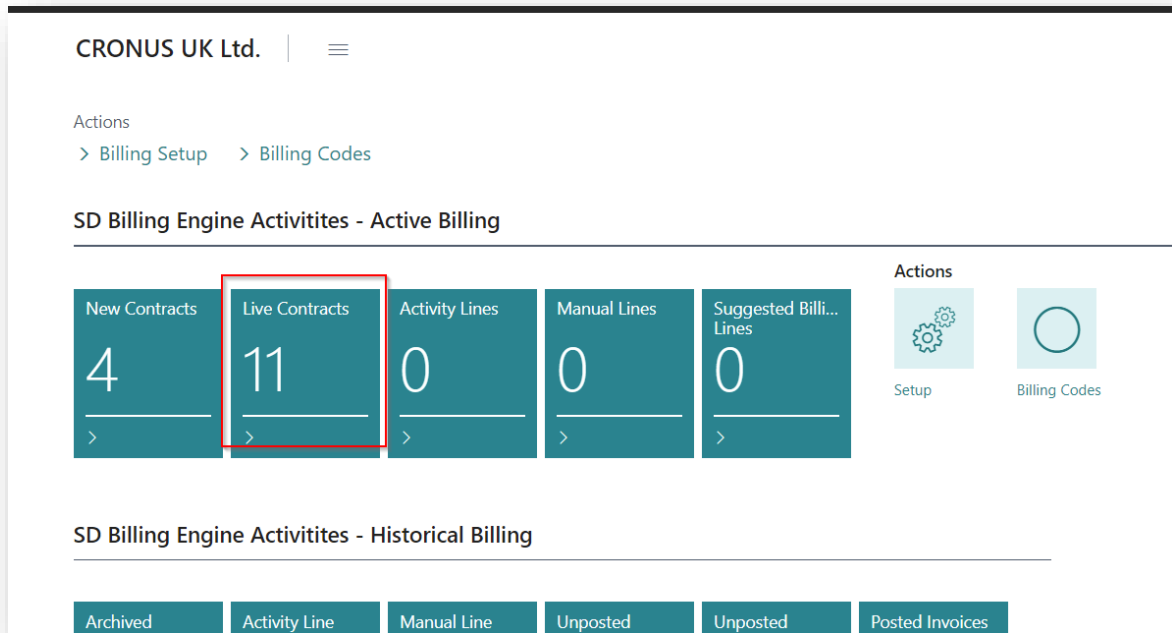
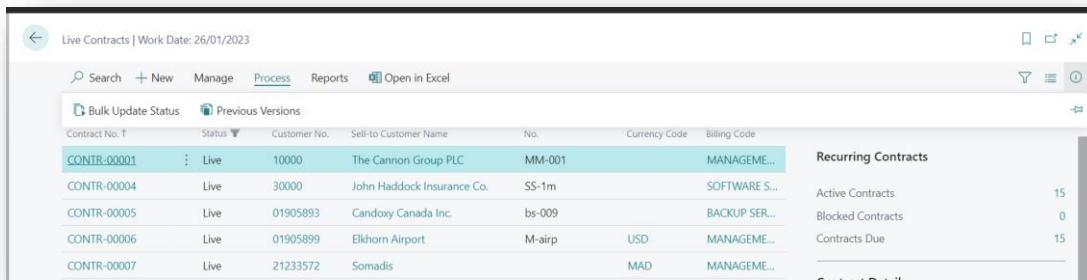


Figure 8-21

The unit price on the recurring contract line is the price that your third-party customer is billed. When the **Enforce Zero Contract Price** on the **SD Billing Engine Setup** is switched off, if the unit price on the recurring contract line is 0 then, when the suggest billing lines routine is run, SD Billing Engine will find the best price using the sales order find best price routine. If the **Enforce Contract Price** on the **SD Billing Engine Setup** is switched on, then SD Billing Engine will use the zero price on the contract line when the suggest billing lines routine is run.

For each recurring contract, there will be a separate invoice generated.

The **SD Billing Engine Contract List** contains the following fields (*Figure 8-22*):



Contract No. #	Status	Customer No.	Sell-to Customer Name	No.	Currency Code	Billing Code
CONTR-00001	Live	10000	The Cannon Group PLC	MM-001		MANAGEME...
CONTR-00004	Live	30000	John Haddock Insurance Co.	SS-1m		SOFTWARE S...
CONTR-00005	Live	01905893	Candoy Canada Inc.	bs-009		BACKUP SER...
CONTR-00006	Live	01905899	Elkhorn Airport	M-airp	USD	MANAGEME...
CONTR-00007	Live	21233572	Somadis		MAD	MANAGEME...

*Figure 8-22*

- **Contract No.** - Displays the customer's recurring contract number.
- **Status** – Displays the contract status. Contract status can be **Live**, **New** or **Closed**. The **Bulk Update Status** action is available for selected or all contracts.
- **Sell-to Customer No.** – Displays the **Sell-to Customer No.** on the recurring contract.
- **Sell-to Customer Name** - Displays the name of the customer in **Sell-to Customer No.**
- **External Document No.** – Displays the external document number for the recurring contract.
- **Currency Code** – Displays the currency code for the customer entered in **Sell-to Customer No.** Displays blank if the customer's currency is the base currency.
- **Billing Code** – Displays the Billing Code associated with the contract.
- **Billing Code Description** - Displays the description of the billing code entered in **Billing Code**.
- **Billing Type** - Displays a billing type of **Recurring**.
- **Blocked** – Displays as selected if the contract is blocked. A blocked contract will not be included in billing calculations.
- **Billing Period** – Displays how often you want to bill e.g., 1M, 1Q etc.
- **Invoice Date Formula** – For **Billing Type** of **Recurring**, displays the date formula to use to calculate the next invoice billing period for the contract.

E.g., if the Billing Period is 1M, the Invoice Date Formula is CM+1M, and the Next Invoice Date is today, then the next invoice billing period will be the first of next month up until the end of next month. This allows you to issue an invoice for the service before the next billing period starts (i.e., you are billing ahead of providing the service).

Once the Suggested Billing has been run and the invoice generated, the system will update the Next Invoice Date, the Last Invoice Date, and the Billing Period on the contract.

- **Starting Date** – Displays the contract’s starting date. The date that the contract is due to start/is valid from. This date will determine if the contract is included in the Suggest Lines action on the **Suggested Billing Lines** page. When a contract is out of date, the Contract No. on the Active Contracts list is highlighted with yellow styling.
- **Ending Date** – Displays the contract’s ending date. The date that the contract is due to end/is valid to. This date will determine if the contract is included in the Suggest Lines action on the **Suggested Billing Lines** page. When a contract is out of date, the Contract No. on the Active Contracts list is highlighted with yellow styling.
- **Amount** – Displays the total contract amount excluding VAT.
- **Default Payment Service** - Displays the default payment service to use, as per standard Microsoft Dynamics 365 Business Central.
- **Default Payment Terms** - Displays the default payment service for the recurring contract. If empty the system will look to the value on the customer card.
- **Default Payment Method** - Displays the default payment method for the recurring contract. If empty the system will look to the value on the customer card.
- **Last Invoice Date** - Displays the date on which the last invoice was generated by the billing engine for the recurring contract.
- **Last Invoice Billing Period** - Displays the billing period on which that the last invoice was generated by the billing engine for the recurring contract.
- **Next Invoice Date** - Displays the date on which the next invoice for the recurring contract is due.
- **Next Invoice Billing Period** - Displays the billing period for the next invoice due for the recurring contract.

- **Count of Suggested Billing Lines** – A flowfield count of the billing lines that have been suggested but have not yet had an invoice created for the billing lines.
- **Count of Unposted Invoices** – A flowfield count of the invoices that have been created for the contract using SD Billing Engine.
- **Count of Posted Invoices** - A flowfield count of the invoices that have been created and posted for the contract using SD Billing Engine.

To access an existing **Contract** from the **SD Billing Engine Contracts** list, from the action bar, in the **Manage** group, select **View**, or **Edit** (*Figure 8-23*).

To create a new **Contract**, from the action bar, select **New** (*Figure 8-23*).

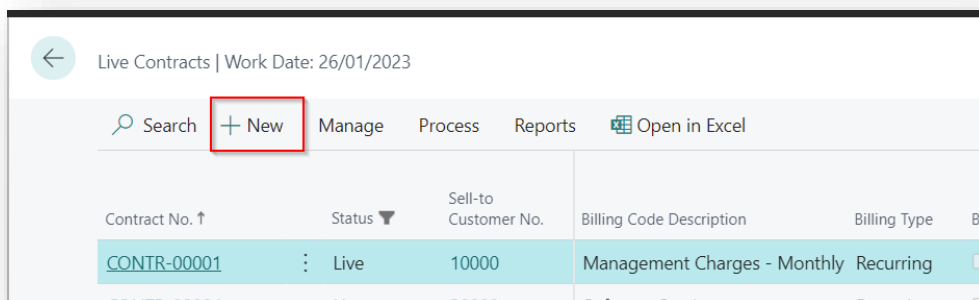
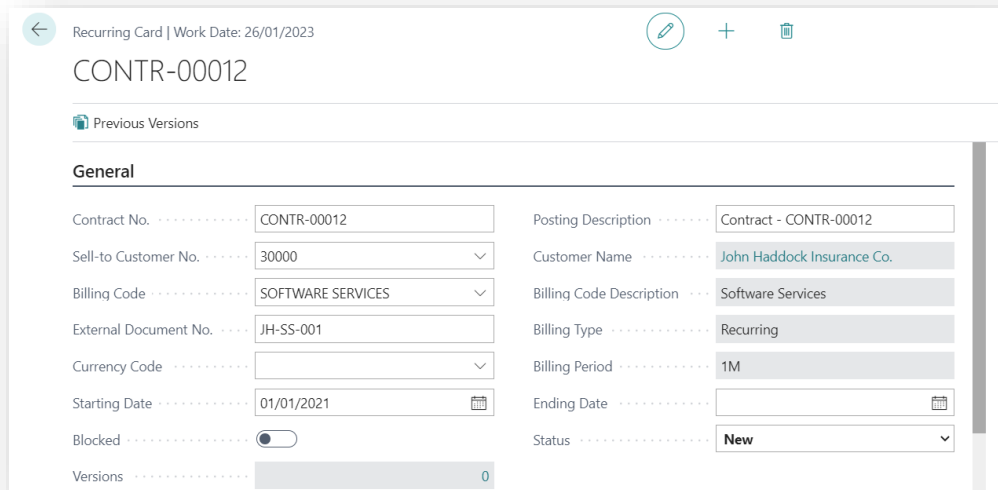


Figure 8-23



## 8.6 Recurring Contract Card

The **Recurring Contracts Card** contains the following fields in the **General** FastTab (Figure 8-24).



Recurring Card | Work Date: 26/01/2023

CONTR-00012

Previous Versions

**General**

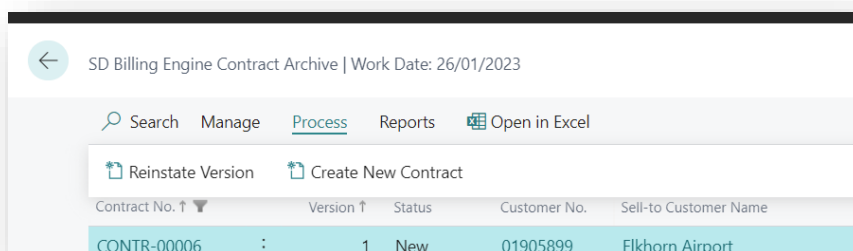
Contract No. ....	CONTR-00012	Posting Description .....	Contract - CONTR-00012
Sell-to Customer No. ....	30000	Customer Name .....	John Haddock Insurance Co.
Billing Code .....	SOFTWARE SERVICES	Billing Code Description .....	Software Services
External Document No. ....	JH-SS-001	Billing Type .....	Recurring
Currency Code .....		Billing Period .....	1M
Starting Date .....	01/01/2021	Ending Date .....	
Blocked .....	<input checked="" type="checkbox"/>	Status .....	New
Versions .....	0		

Figure 8-24

- **Contract No.** – Displays the number in the **Recurring Contract No. Series** as specified in the **SD Billing Engine Setup**.
- **Posting Description** – Passed to the Sales Invoices and stamped on the associated Customer Ledger Entries.
- **Sell-to Customer No.** – Select the Sell-to Customer No. for the recurring contract from a list of existing customers. This is the third party that you want to bill.
- **Sell-to Customer Name** – Displays the name of the customer in **Sell-to Customer No.**
- **Billing Code** – Select the billing code for the recurring contract from a list of billing codes with a Billing Type of Recurring.
- **Billing Code Description** – Displays the description of the billing code entered in **Billing Code**.
- **External Document No.** – Enter an external document number.
- **Billing Type** – Displays the billing type of **Recurring**.

- **Currency Code** – Displays the currency code for the customer entered in **Sell-to Customer No.** Displays blank if the customer’s currency is the base currency.
- **Billing Period** – For Billing Type of Recurring, displays how often you want to bill e.g., 1M, 1Q etc.
- **Starting Date** – Enter the date that the contract is due to start/is valid from. This date will determine if the contract is included in the Suggest Lines action on the **Suggested Billing Lines** page.
- **Ending Date** – Enter the date that the contract is due to end/is valid to. This date will determine if the contract is included in the Suggest Lines action on the **Suggested Billing Lines** page.
- **Blocked** – Select this checkbox to block the contract. Billing lines will not be generated for blocked contracts.
- **Status** – By default, contracts are initially created with a status of **New**. Changes can only be made to **New** contracts. Once a contract is updated to **Live** the contract is noneditable. Only **Live** contracts will be included in the **Suggest Lines** action. Contracts can also be set to **Closed**. When **Closed**, contracts are moved to the **Archived Contracts** cue.
- **Versions** – Shows the number of contract versions. A contract is archived and versioned when moved from **New** to **Live**. You can drill down and see previous versions of the Contract from here.

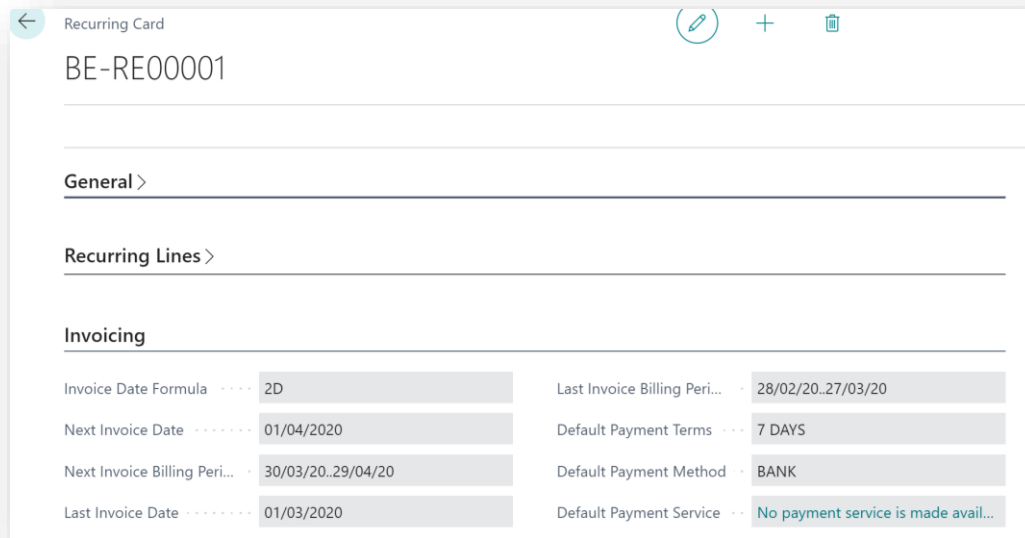
Archived versions of the contract are available from the **Previous Versions** action on the Recurring Contract Card. Archived versions of a contract can be reinstated as the current version, or a new contract can be created from the archived version (*Figure 8-25*).



Contract No. ↑	Version ↑	Status	Customer No.	Sell-to Customer Name
CONTR-00006	1	New	01905899	Elkhorn Airport

Figure 8-25

The following fields are contained in the **Invoicing** FastTab (Figure 8-26):



Invoicing	
Invoice Date Formula	2D
Next Invoice Date	01/04/2020
Next Invoice Billing Period	30/03/20..29/04/20
Last Invoice Date	01/03/2020
Last Invoice Billing Period	28/02/20..27/03/20
Default Payment Terms	7 DAYS
Default Payment Method	BANK
Default Payment Service	No payment service is made avail...

Figure 8-26

- **Invoice Date Formula** – Defaults to the **Invoice Date Formula** entered for the Billing Code in the **Billing Code Setup**. Displays the date formula to use to calculate the next invoice billing period for the contract.

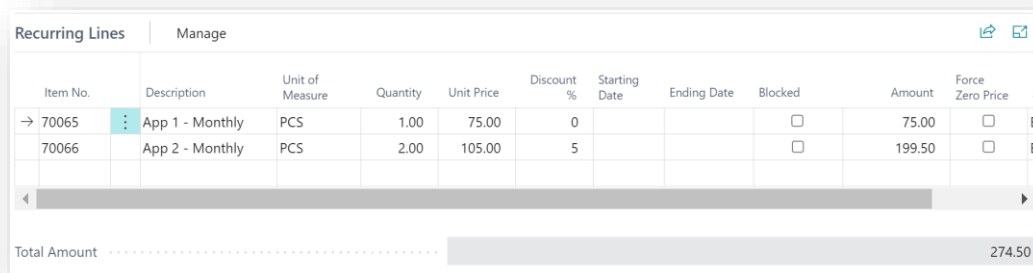
E.g., if the Billing Period is 1M, the Invoice Date Formula is CM+1M, and the Next Invoice Date is today, then the next invoice billing period will be the first of next month up until the end of next month. This allows you to issue an invoice for the service before the next billing period starts (i.e., you are billing ahead of providing the service).

Once the Suggested Billing has been run and the invoice generated, the system will update the Next Invoice Date, the Last Invoice Date, and the Billing Period on the contract.

- **Next Invoice Date** – Displays the next invoice date. For a new contract, this date must be initially entered manually. When initially entered, the Next Invoice Billing Period is updated. When the invoice has been generated and posted, the system will automatically calculate and update the Next Invoice Date and Next Invoice Billing Period.
- **Next Invoice Billing Period** – Displays the period for which the next invoice covers.
- **Last Invoice Date** – Displays the date on which the last invoice was generated by the billing engine for the recurring contract.

- **Last Invoice Billing Period** – Displays the billing period on which that the last invoice was generated by the billing engine for the recurring contract.
- **Default Payment Terms** - Displays the **Default Payment Terms** entered for the billing code in the **Billing Code Setup**. If empty, the system will look to the value on the customer card.
- **Default Payment Method** - Displays the **Default Payment Method** entered for the billing code in the **Billing Code Setup**. If empty, the system will look to the value on the customer card.
- **Default Payment Service** – Displays the **Default Payment Service** entered for the billing code in the **Billing Code Setup**. If empty, the system will look to the value on the customer card.

The following fields are contained in the **Recurring Lines** FastTab (*Figure 8-27*):



Item No.	Description	Unit of Measure	Quantity	Unit Price	Discount %	Starting Date	Ending Date	Blocked	Amount	Force Zero Price
→ 70065	App 1 - Monthly	PCS	1.00	75.00	0			<input type="checkbox"/>	75.00	<input type="checkbox"/>
70066	App 2 - Monthly	PCS	2.00	105.00	5			<input type="checkbox"/>	199.50	<input type="checkbox"/>
Total Amount									274.50	

*Figure 8-27*

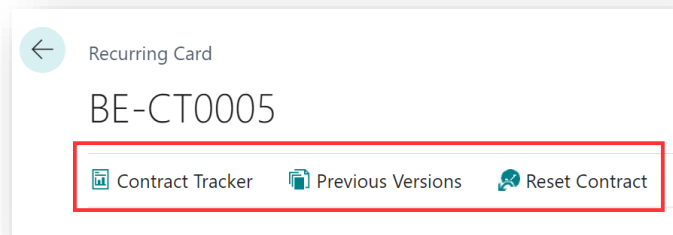
- **Item No** – Enter the item to be billed on the contract line. Choose from a list of existing items from your Microsoft Dynamics 365 Business Central database.
- **Description** – Displays the description of the item entered in item no.
- **Unit of Measure** – Enter a unit of measure. Defaults to the unit of measure on the item card.
- **Quantity** – Enter the quantity of the item to be billed.
- **Unit Price** – Enter the price for the item to be billed. Defaults to 0. Click the **Assist Edit** to the right of this field to find the best price for the item.

When the **Enforce Zero Contract Price** on the **SD Billing Engine Setup** is switched off and if the unit price on the recurring contract line is 0 then, when the suggest billing lines routine is run, SD Billing Engine will find the best price using the sales order find best price routine.

If the **Enforce Zero Contract Price** on the **SD Billing Engine Setup** is switched on, then SD Billing Engine will use the zero price on the contract line when the suggest billing lines routine is run.

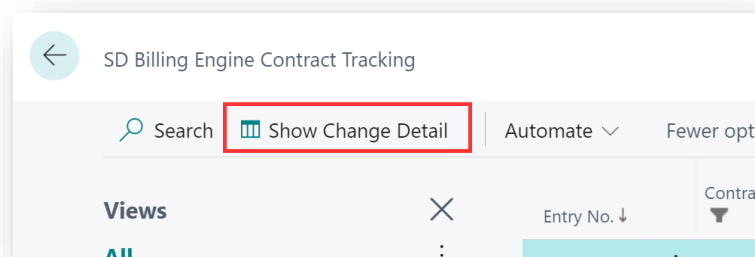
- **Discount %** - Enter the discount % for the item price to be billed.
- **Starting Date** - Enter the date that the contract line is due to start/is valid from. This date will determine if the contract line is included in the Suggest Lines action on the **Suggested Billing Lines** page. If a contract line has expired, the **Item No.** is highlighted with red styling.
- **Ending Date** Enter the date that the contract line is due to end/is valid up to. This date will determine if the contract line is included in the Suggest Lines action on the **Suggested Billing Lines** page. If a contract line has expired, the **Item No.** is highlighted with red styling.
- **Blocked** – Select this checkbox to block the contract line. A blocked contract line will not be included in billing calculations.
- **Amount** – Displays the amount for the recurring contract line.
- **Force Zero Price** – Allows individual lines to use a zero-contract price if the **Enforce Zero Contract Price** on the **SD Billing Engine Setup** is switched off.
- **Job Code** – Enter the job code for the recurring contract line.
- **Total Amount** – Displays the total amount of the contract lines on the contract.

The **Recurring Contract Card** contains the following actions on the action bar (*Figure 8-28*):



*Figure 8-28*

- **Contract Tracker** – Choose this action to view the amount and quantity changes that have been made on the contract. From the **Contract Tracking** list, you can choose the **Show Change Detail** action which displays detailed line level tracking contract changes (*Figure 8-29*).



*Figure 8-29*

The Change Type on the summary Contract Tracking displays an increase or a decrease. The Entry Type on the detailed Contract Tracking specifies if there was a quantity change or a price change.

On **upgrading to version 5.0.0 of SD Billing Engine**, detailed Contract Tracking entries are created from existing details in the Contract Versions. An action to build the Contract Tracker Detail table, **Run Contract Tracker Upgrade** is surfaced on the **SD Billing Engine Setup** card. This action calls upgrade code which creates a new version of all existing Contracts; builds the Contract Tracker Detail table; updates Creation records in Contract Header to increase; updates Removal records in Contract Header to decrease; and sets an Upgrade Boolean field on the Billing Engine Setup table to false.

- **Previous Versions** – Select this action to view the previous archived versions of the contract. A contract is archived and versioned when moved from **Live** to **New**. You can drill down and see previous versions of the contract from here.

Archived versions of a contract can be reinstated as the current version, or a new contract can be created from the archived version.

- **Reset Contract** – Chose this action to reset the contract. This action archives the contract, reinstates the contract with the same number and allows the user to modify the Next Invoice Date, the Billing Code, or the Currency Code on the contract.

## 8.7 Activity Lines List

The **SD Billing Engine Activity Lines** list, accessed by searching the Tell Me, or by drilling through on the **Activity Lines** cue in the **SD Billing Engine Role Centre** (Figure 8-30), allows you to define activity-based billing either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.

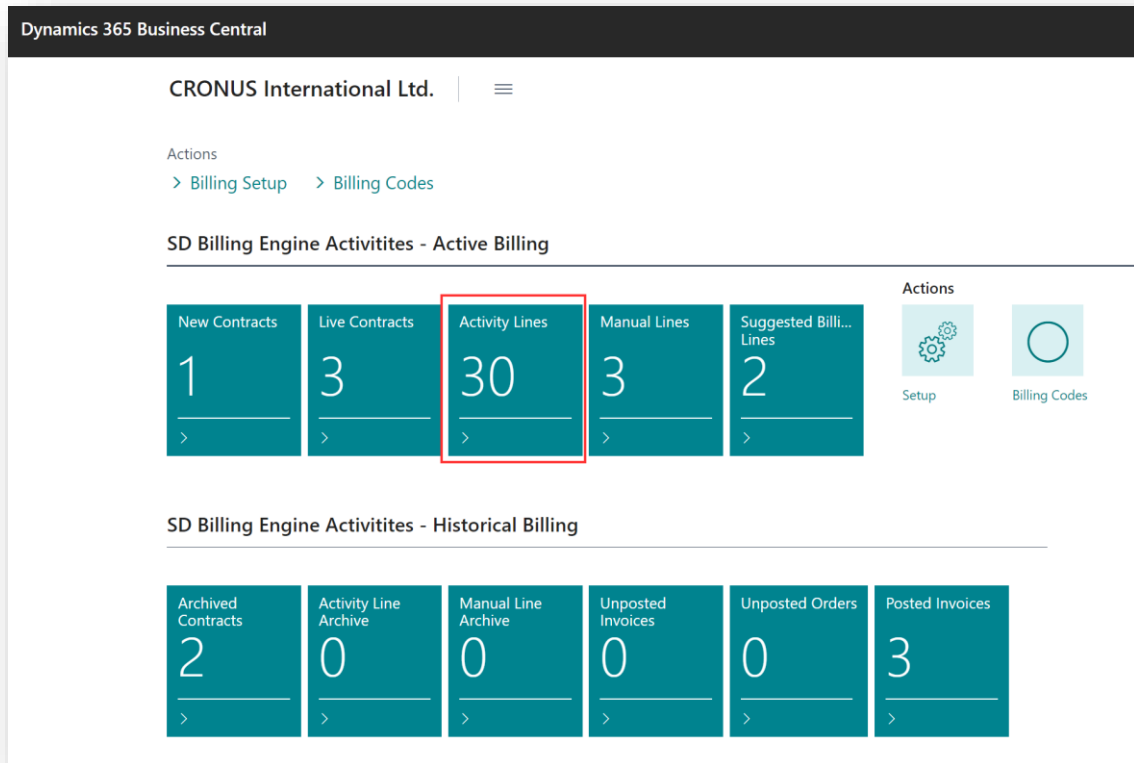


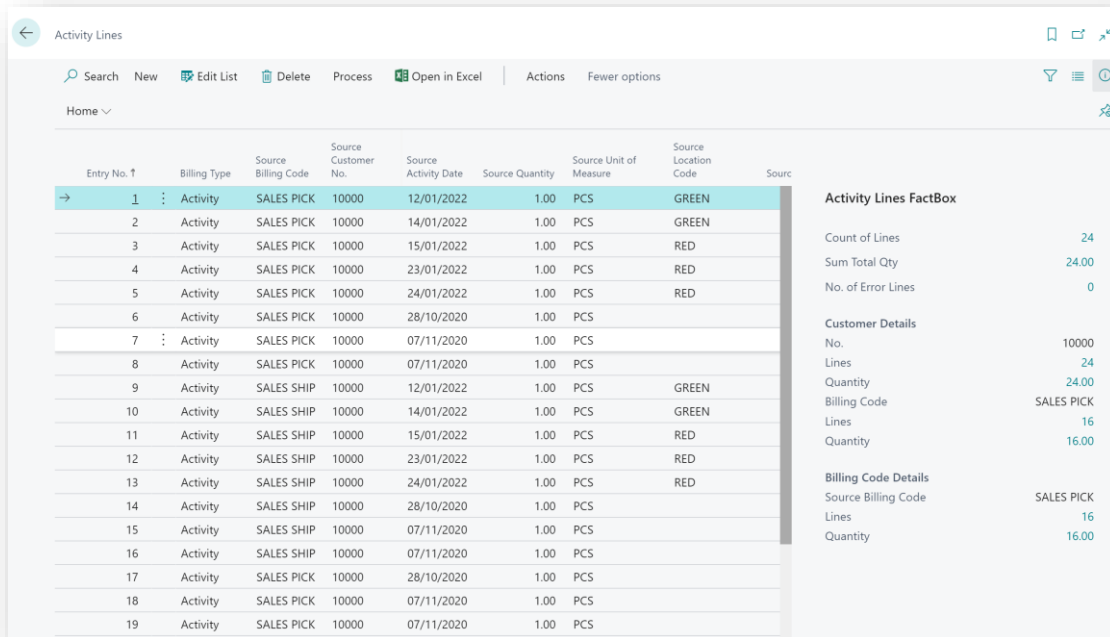
Figure 8-30

The price on the activity line is the price that your customer is billed. If the price on the activity line is 0, then, when the suggest billing lines is run, it will find the best price, if it exists, using the sales order find best price routine.

The **Activity Lines Archive** table is populated when the invoice has been created and posted for the activity line.

The **SD Billing Engine Activity Lines** list contains the following fields (Figure 8-31):





Entry No. ↑	Billing Type	Source Billing Code	Source Customer No.	Source Activity Date	Source Quantity	Source Unit of Measure	Source Location Code	Source
1	Activity	SALES PICK	10000	12/01/2022	1.00	PCS	GREEN	
2	Activity	SALES PICK	10000	14/01/2022	1.00	PCS	GREEN	
3	Activity	SALES PICK	10000	15/01/2022	1.00	PCS	RED	
4	Activity	SALES PICK	10000	23/01/2022	1.00	PCS	RED	
5	Activity	SALES PICK	10000	24/01/2022	1.00	PCS	RED	
6	Activity	SALES PICK	10000	28/10/2020	1.00	PCS		
7	Activity	SALES PICK	10000	07/11/2020	1.00	PCS		
8	Activity	SALES PICK	10000	07/11/2020	1.00	PCS		
9	Activity	SALES SHIP	10000	12/01/2022	1.00	PCS	GREEN	
10	Activity	SALES SHIP	10000	14/01/2022	1.00	PCS	GREEN	
11	Activity	SALES SHIP	10000	15/01/2022	1.00	PCS	RED	
12	Activity	SALES SHIP	10000	23/01/2022	1.00	PCS	RED	
13	Activity	SALES SHIP	10000	24/01/2022	1.00	PCS	RED	
14	Activity	SALES SHIP	10000	28/10/2020	1.00	PCS		
15	Activity	SALES SHIP	10000	07/11/2020	1.00	PCS		
16	Activity	SALES SHIP	10000	07/11/2020	1.00	PCS		
17	Activity	SALES PICK	10000	28/10/2020	1.00	PCS		
18	Activity	SALES PICK	10000	07/11/2020	1.00	PCS		
19	Activity	SALES PICK	10000	07/11/2020	1.00	PCS		

Activity Lines FactBox	
Count of Lines	24
Sum Total Qty	24.00
No. of Error Lines	0
Customer Details	
No.	10000
Lines	24
Quantity	24.00
Billing Code	SALES PICK
Lines	16
Quantity	16.00
Billing Code Details	
Source Billing Code	SALES PICK
Lines	16
Quantity	16.00

Figure 8-31

- **Entry No.** - Displays the entry number for the activity line.
- **Billing Type** - Displays a billing type of **Activity**.
- **Billing Source Code** – Displays the billing code associated with the source activity line. Either imported from an external source, or, generated from your Item Ledger Entry based on activity in the period selected.
- **Source Customer No.** – Displays the customer number of the source activity line.
- **Source Activity Date** – Displays the activity date of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Source Quantity** – Displays the quantity of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Source Unit of Measure** – Displays the unit of measure of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.

- **Source Location Code** – Displays the unit of measure of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Source Price** – Displays the price of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Source Description** – Displays the description of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.

For example, if the source of the activity line is the Item Ledger Entry and the **Setup Type** in the **SD Billing Engine Setup** is **Advanced**, the description is composed of the **Code** from the **SD Billing Engine Activity Advanced Setup** and the Document No. from the Item Ledger Entry.

- **Source Job No** - Displays the job number of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Source Currency** - Displays the currency of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Source Delivery Date** – Displays the delivery date of the source activity line. Either imported from an external source, or, generated from your item ledger entry based on activity in the period selected.
- **Billing Code** – When the activity line is validated the value of the **Source Billing Code** is transferred to this field.
- **Customer No.** – When the activity line is validated the value of the **Source Customer No.** is transferred to this field. This field can be updated.
- **Activity Date** – When the activity line is validated the value of the **Source Activity Date** is transferred to this field. This field can be updated.
- **Item No.** – When the activity line is validated the value of the **Item No.** associated with the billing code in **Billing Code** is transferred to this field.

- 
- **Quantity** – When the activity line is validated the value of the **Source Quantity** is transferred to this field. This field can be updated.
  - **Unit of Measure** – When the activity line is validated the value of the **Source Unit of Measure** is transferred to this field. This field can be updated.
  - **Location Code** – When the activity line is validated the value of the **Source Location Code** is transferred to this field. This field can be updated.
  - **Unit Price** – When the activity line is validated the value of the **Source Price** is transferred to this field. This field can be updated.
  - **Description** – When the activity line is validated the value of the **Source Description** is transferred to this field. This field can be updated.
  - **Job Code** – When the activity line is validated the value of the **Source Job No** is transferred to this field. This field can be updated.
  - **Currency** – When the activity line is validated the value of the **Source Currency** is transferred to this field. This field can be updated.
  - **Delivery Date** – When the activity line is validated the value of the **Source Delivery Date** is transferred to this field. This field can be updated.
  - **Validate Errors** – Any validation errors for the source activity line are displayed here.
  - **Suggested Billing Line No.** – The suggested billing line number from the billing line that has been suggested for the activity line but has not yet had an invoice created for the associated billing line.
  - **Document No.** – The unposted invoice number that has been created for the activity line in the **Suggested Billing Lines** when the **Generate Invoices** action in the **Suggested Billing Lines** is run.
  - **Source Type** – Displays the source type for the activity lines. Values are **Item Ledger Entry, Warehouse, External** and **Extension**.
  - **Source Entry No.** – The Entry No of the source. For example, if the Source Type is Item Ledger Entry, then the entry number from the Item Ledger Entry is displayed here.

To generate the activity lines, either imported from an external source, or, generated from your Item Ledger Entry based on activity in the period selected, from the **SD Billing Engine Activity Lines** list, from the action bar, in the **New** group, select **Get Entries** (Figure 8-32).

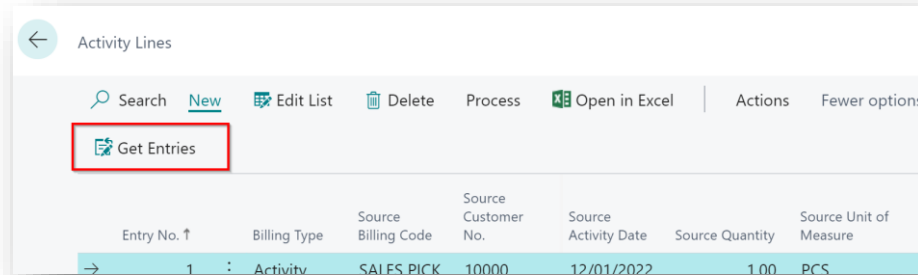


Figure 8-32

To limit the activity lines generated, you can enter customer and date filters (Figure 8-33):

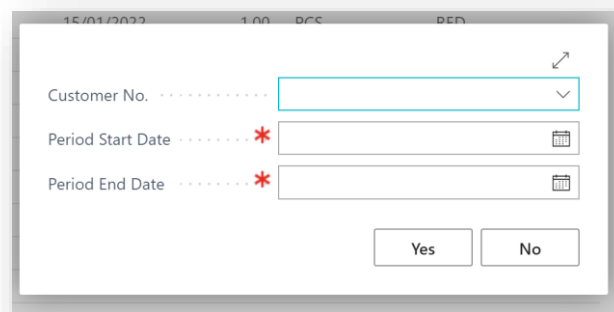


Figure 8-33

When generating the activity lines from your Item Ledger Entry based on activity in the period selected, you are notified of any items that have been excluded from the **Get Entries** due to missing a customer dimension value (Figure 8-34). Receiving this notification is dependent on having the **Disable Item Notifications** in the **SD Billing Engine Setup** switched off.

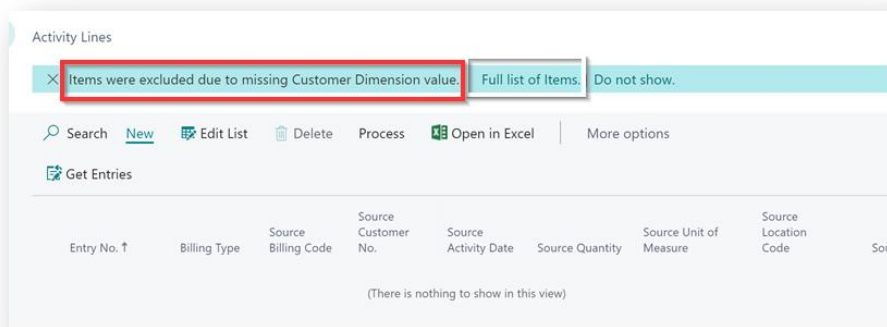


Figure 8-34

If you want to set a customer dimension value on one of the missing items for inclusion in the **Get Entries**, select the **Full List of Items** notification (*Figure 8-35*).

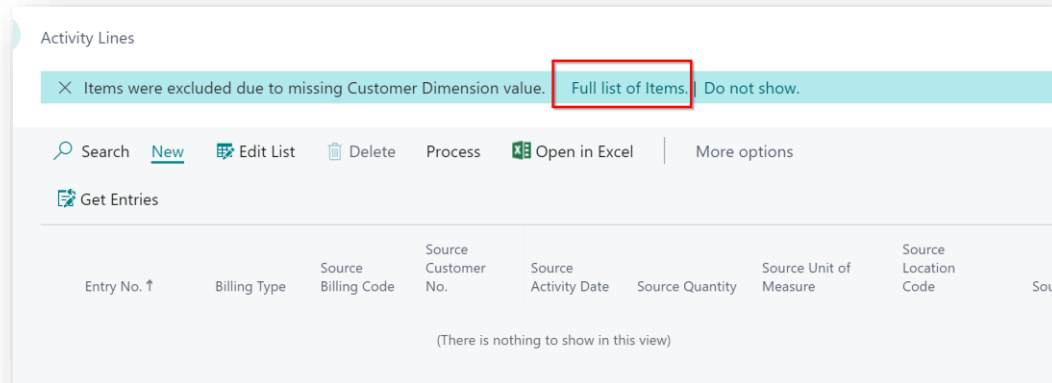


Figure 8-35

The list of items is presented in an information message like that below (*Figure 8-36*). You can highlight and copy the items in the information message and paste the copied text into an item no. filter on the standard **Item** list for easy update of the items.

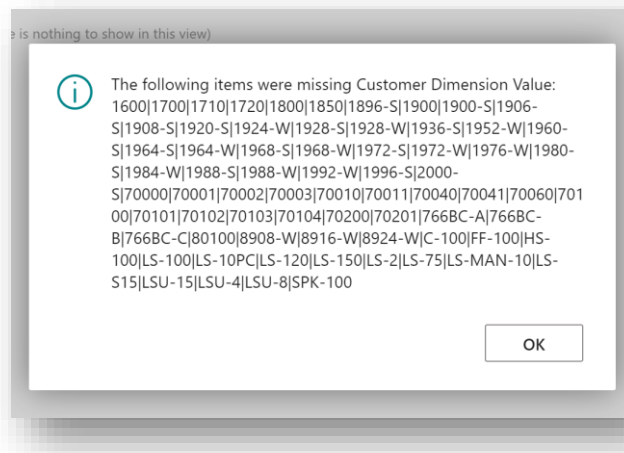
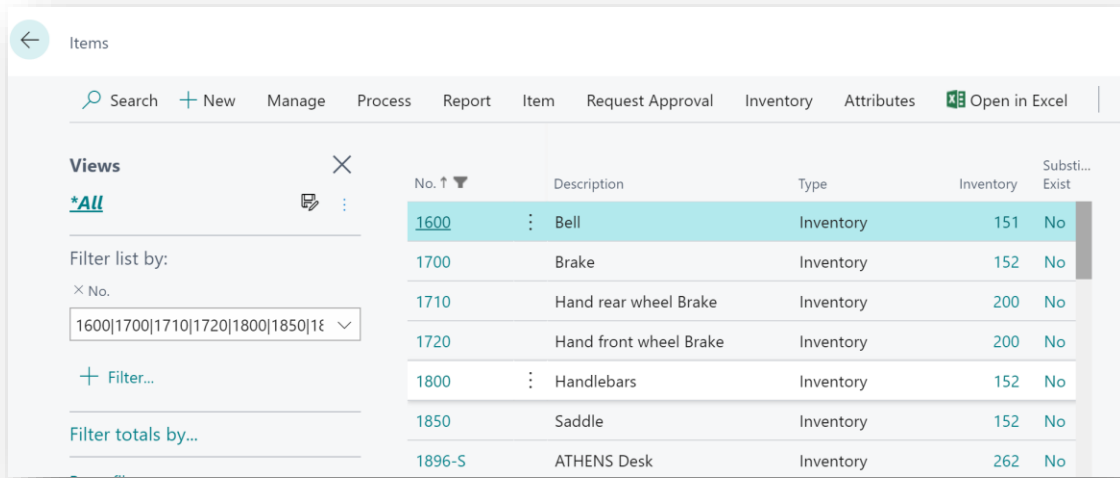


Figure 8-36

Having highlighted the item numbers in the information message above, navigate to the standard **Item** list and paste the copied text into the item no. filter on the standard **Item** list. Navigate to the item that you wish to update for inclusion in the activity lines (*Figure 8-37*).



No. ↑	Description	Type	Inventory	Subst... Exist
1600	Bell	Inventory	151	No
1700	Brake	Inventory	152	No
1710	Hand rear wheel Brake	Inventory	200	No
1720	Hand front wheel Brake	Inventory	200	No
1800	Handlebars	Inventory	152	No
1850	Saddle	Inventory	152	No
1896-S	ATHENS Desk	Inventory	262	No

Figure 8-37

In the **Item** card from the action bar, in the **Related** group, choose **Item** and then **Dimensions** (Figure 8-38).

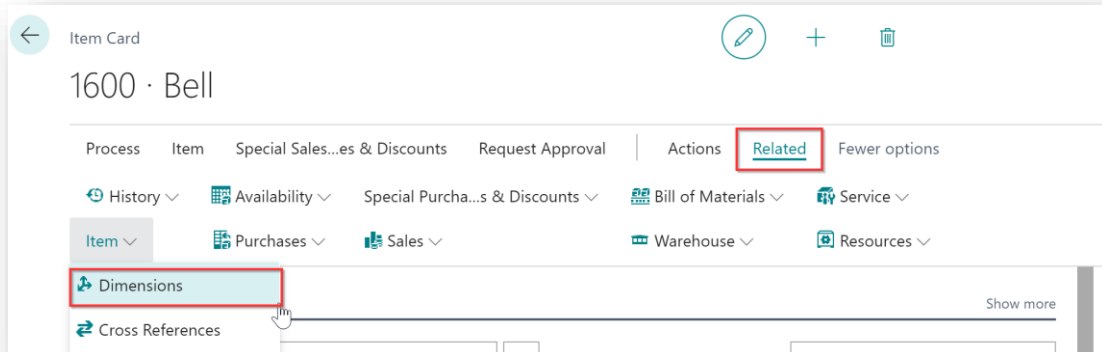


Figure 8-38

Select the Dimension Code that you have defined for the **Customer Dimension** in the **SD Billing Engine Setup** (Figure 8-39). (**Note:** The Dimension Code does not need to be called Customer you could set up a Dimension Code called, for example, Billing Engine Customer.)

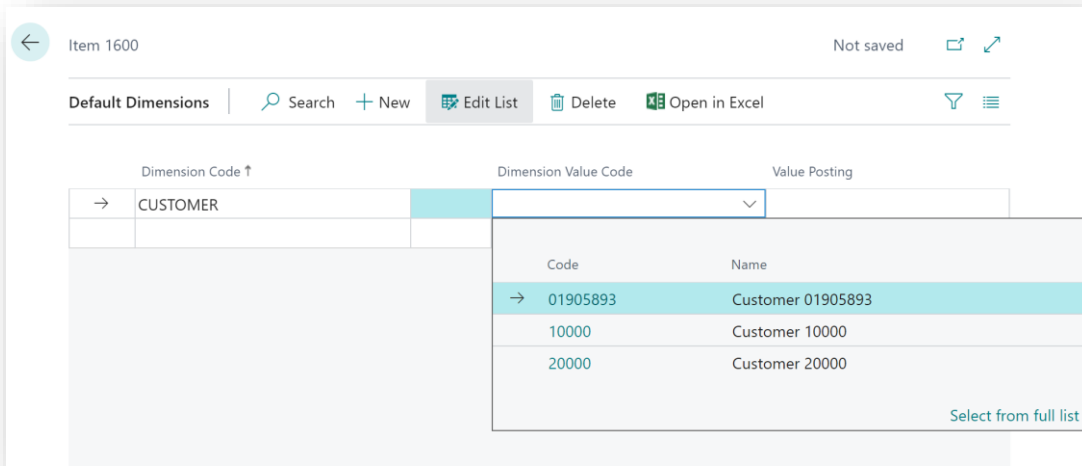


Figure 8-39

Select a Dimension Value Code for the Dimension Code selected (Figure 8-40). (Note: The Code for the Dimension Value Code must match the Customer No on the Customer Card.)

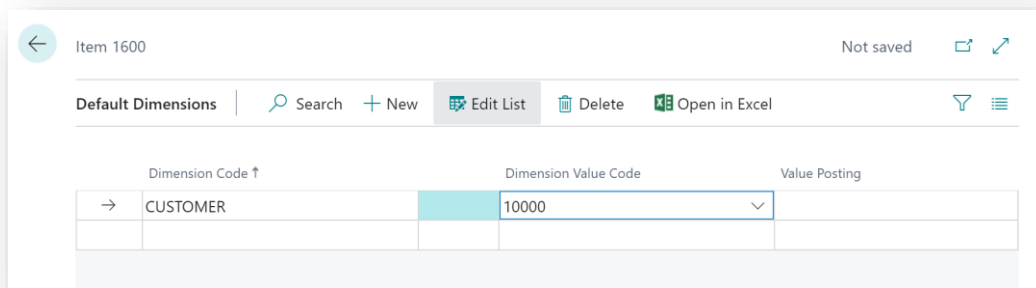


Figure 8-40

To validate the activity lines so the activity lines can be submitted for billing and are included in the for selection in the **Suggested Billing Lines**, in the **SD Billing Engine Activity Lines** list, from the action bar, in the **Process** group, select **Validate Selected** or **Validate All** (Figure 8-41).

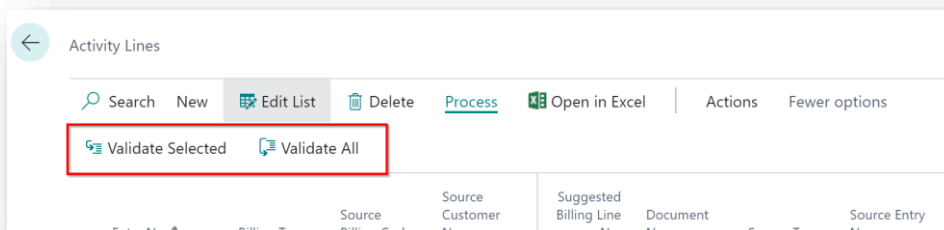


Figure 8-41

Activity lines must be validated before they can be submitted for billing.

## 8.8 Manual Lines List

The **SD Billing Engine Manual Lines** list, accessed by searching the Tell Me, or by drilling through on the **Manual Lines** cue in the **SD Billing Engine Role Centre** (Figure 8-42), allows you to manually log special charges for items and events (e.g., special haulage costs, inspection certs, pallet rebuilds, splitting out pallets, backup restore events).

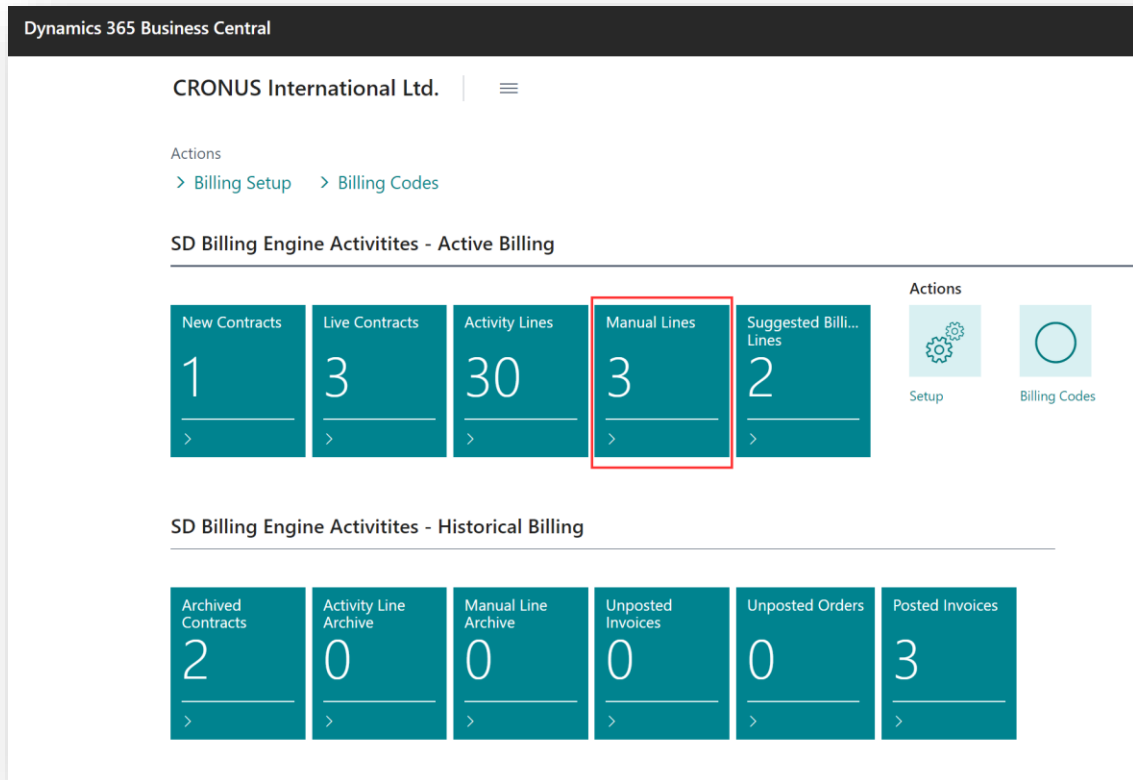


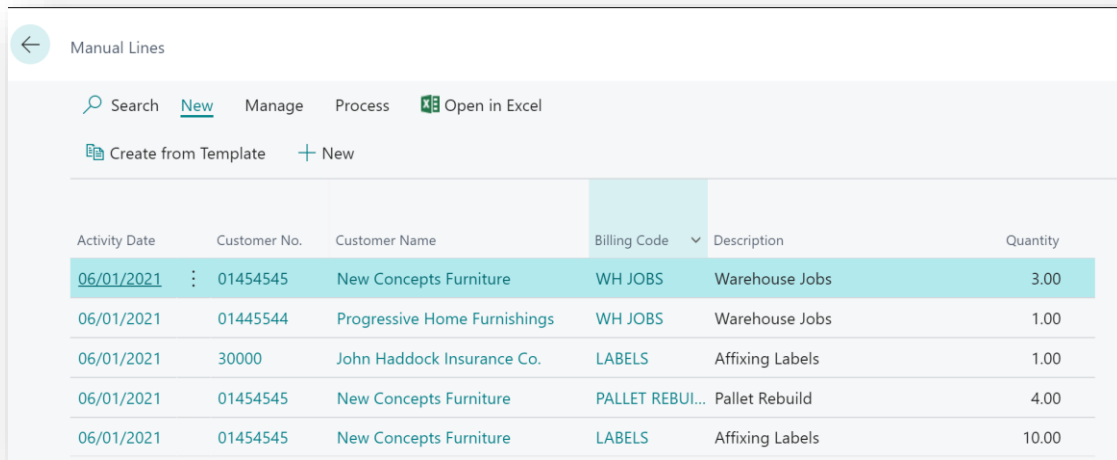
Figure 8-42

The price on the manual line is the price that your customer is billed. If the price on the manual line is 0, i.e., there is no price entered on the manual line, then, when the suggest billing lines is run, it will find the best price, if it exists, using the sales order find best price routine.

The **Manual Lines Archive** table is populated when the invoice has been created and posted for the manual line.



The **SD Billing Engine Manual Lines** list contains the following fields (*Figure 8-43*):



Activity Date	Customer No.	Customer Name	Billing Code	Description	Quantity
06/01/2021	01454545	New Concepts Furniture	WH JOBS	Warehouse Jobs	3.00
06/01/2021	01445544	Progressive Home Furnishings	WH JOBS	Warehouse Jobs	1.00
06/01/2021	30000	John Haddock Insurance Co.	LABELS	Affixing Labels	1.00
06/01/2021	01454545	New Concepts Furniture	PALLET REBUI...	Pallet Rebuild	4.00
06/01/2021	01454545	New Concepts Furniture	LABELS	Affixing Labels	10.00

*Figure 8-43*

- **Activity Date** – Displays the date of the manually entered activity, i.e., the date that the manual event was logged.
- **Customer No.** – Displays the customer no. for whom the manual activity was logged.
- **Customer Name.** – Displays the name of the customer entered in **Customer No.**
- **Billing Code** – Displays the billing code for the manual activity.
- **Billing Description** – Displays the billing code description.
- **Quantity** – Displays the quantity entered by the user.
- **Price** – Displays the price for the manual activity.
- **Unit of Measure** – Displays the unit of measure for the manual activity.
- **Created Date Time** – Displays the date time that the manual activity was logged.
- **Created User ID** – The user id of the user who created/logged the manual activity.
- **Suggested Billing Line No.** – Displays the suggested billing line no that has been generated for the manual activity line. This enables users to easily determine if a billing line has been generated for the manually entered activity.

- **Invoice No.** – Displays the unposted invoice number that the manually entered activity line has been invoiced to if the suggest billing lines have been run and an invoice generated for the manual line.
- **Validate Errors** – Displays any validation errors that must be corrected before the manually entered activity line can be inserted onto the billing lines entry table.
- **Entry No.** – The entry no for the manual activity line.
- **Job Code** – The job code entered for the manual activity line.

To access an existing **Manual Line** from the **SD Billing Engine Manual Lines** list, from the action bar, in the **Manage** group, select **View**, or **Edit**. To log a new **Manual Event**, from the **Home** tab, in the **New** group, select **New** (Figure 8-44).

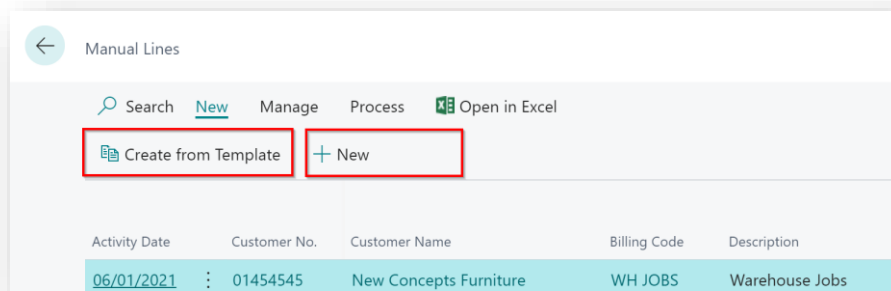


Figure 8-44

- **Create from Template** – Choose this action to easily log a manual event or task using a pre-defined template.
- **New** - Choose this action to open the **SD Billing Engine Manual Activity Card** and log a manual event or task.

The **Manual Lines** list page contains the following action on action bar in the **Process** group (Figure 8-45):

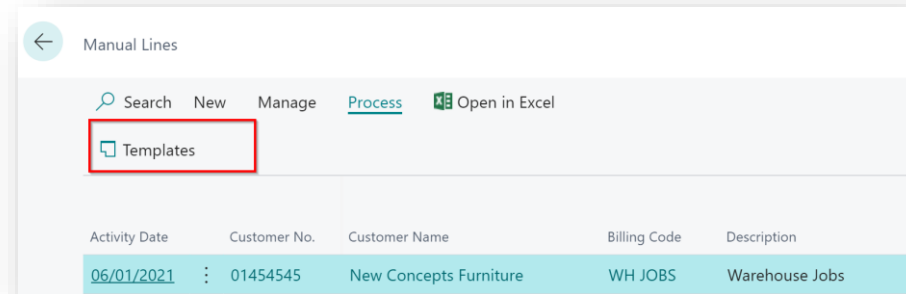
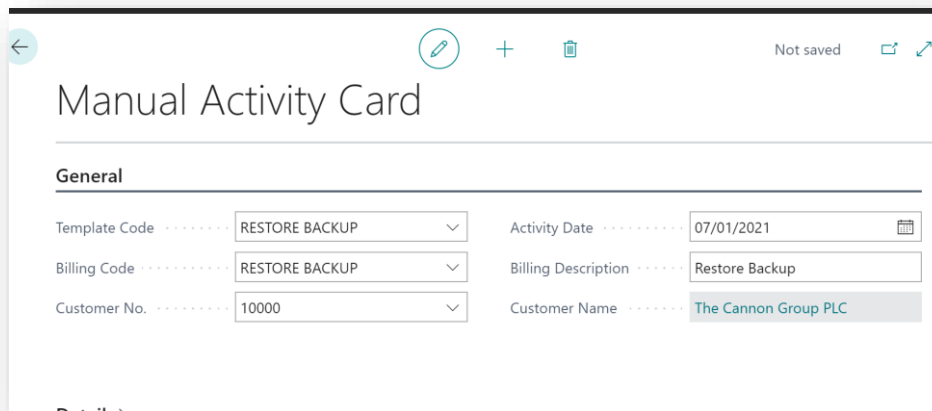


Figure 8-45

- **Templates** – Choose this action to view existing manual templates or to create a new template.

## 8.9 Manual Lines Card

The **SD Billing Engine Manual Activity Card**, accessed from the **SD Billing Engine Manual Lines** list, allows you to manually log special charges for items and events (e.g., special haulage costs, inspection certs, pallet rebuilds, splitting out pallets, backup restore events) and contains the following fields in the **General** FastTab (*Figure 8-46*):



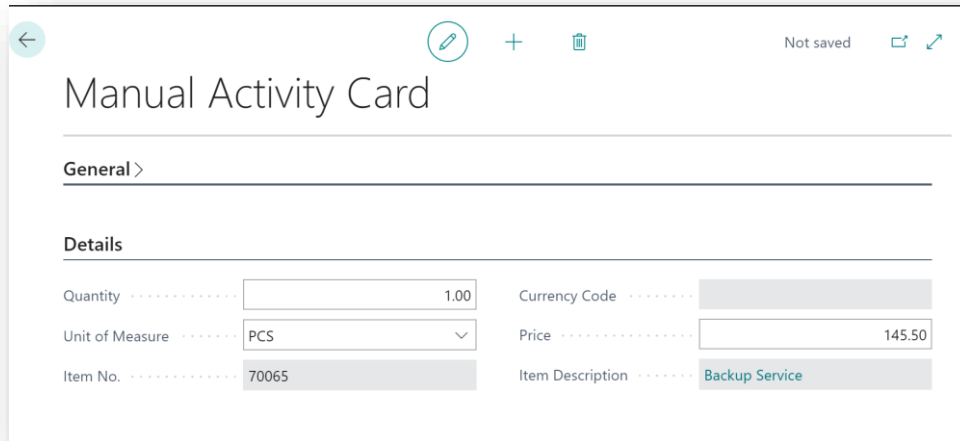
The screenshot shows the 'Manual Activity Card' interface. At the top, there is a navigation bar with a back arrow, an edit icon, a plus sign, a trash icon, and a 'Not saved' status with share and refresh icons. The main title is 'Manual Activity Card'. Below the title is a section labeled 'General' with a horizontal separator line. The form contains the following fields:

- Template Code**: A dropdown menu with 'RESTORE BACKUP' selected.
- Activity Date**: A date input field with '07/01/2021' and a calendar icon.
- Billing Code**: A dropdown menu with 'RESTORE BACKUP' selected.
- Billing Description**: A text input field with 'Restore Backup'.
- Customer No.**: A dropdown menu with '10000' selected.
- Customer Name**: A text input field with 'The Cannon Group PLC'.

Figure 8-46

- **Template Code** – Select a template code for the manual activity that you want to log. You can create and use manual templates to quickly log commonly recorded events. You can choose to leave the **Template Code** blank.
- **Activity Date** – Defaults to today's date. Enter the date that you are logging the activity for.
- **Billing Code** – Select the billing code for the manual activity.
- **Billing Description** – Displays the description for the billing code entered in **Billing Code**. Users can overtype this description.
- **Customer No.** – Select the customer for whom you are logging the manual activity.
- **Customer Name.** – Displays the name of the customer entered in **Customer No.**

The **SD Billing Engine Manual Activity Card** contains the following fields in the **Details** FastTab (Figure 8-47):



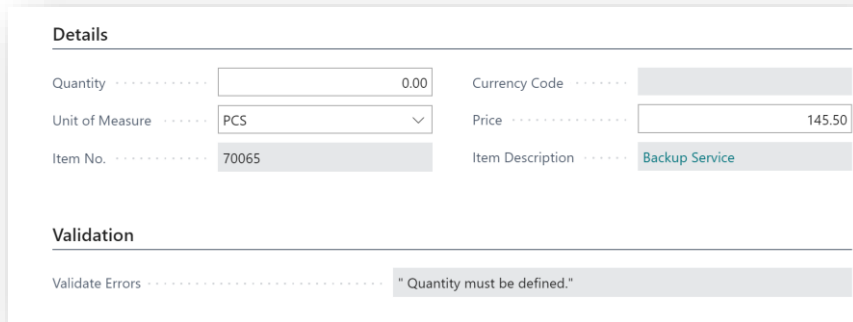
The screenshot shows a mobile application interface for a 'Manual Activity Card'. At the top, there is a navigation bar with a back arrow, an edit icon, a plus sign, a trash icon, and the text 'Not saved' with share and refresh icons. Below the navigation bar is the title 'Manual Activity Card'. Underneath is a 'General' section with a chevron icon. The 'Details' section contains the following fields:

Quantity	1.00	Currency Code	
Unit of Measure	PCS	Price	145.50
Item No.	70065	Item Description	Backup Service

Figure 8-47

- **Quantity** – Enter the quantity of the event or task you are logging.
- **Unit of Measure** – Enter a unit of measure for the event or task you are logging.
- **Item No.** – Displays the item no. for the billing code entered.
- **Currency Code** – Displays the customer’s currency code.
- **Price** – Enter a price for the task or activity you are logging. The price on the manual line is the price that your customer is billed. If the price on the manual line is 0, i.e., there is no price entered on the manual line, then, when the suggest billing lines is run, it will find the best price, if it exists, using the sales order find best price routine.
- **Item Description** – Displays the description for the item in **Item No.**

The **Validation** FastTab contains the following fields (*Figure 8-48*):



**Details**

Quantity ..... 0.00      Currency Code .....  
 Unit of Measure ..... PCS      Price ..... 145.50  
 Item No. .... 70065      Item Description ..... Backup Service

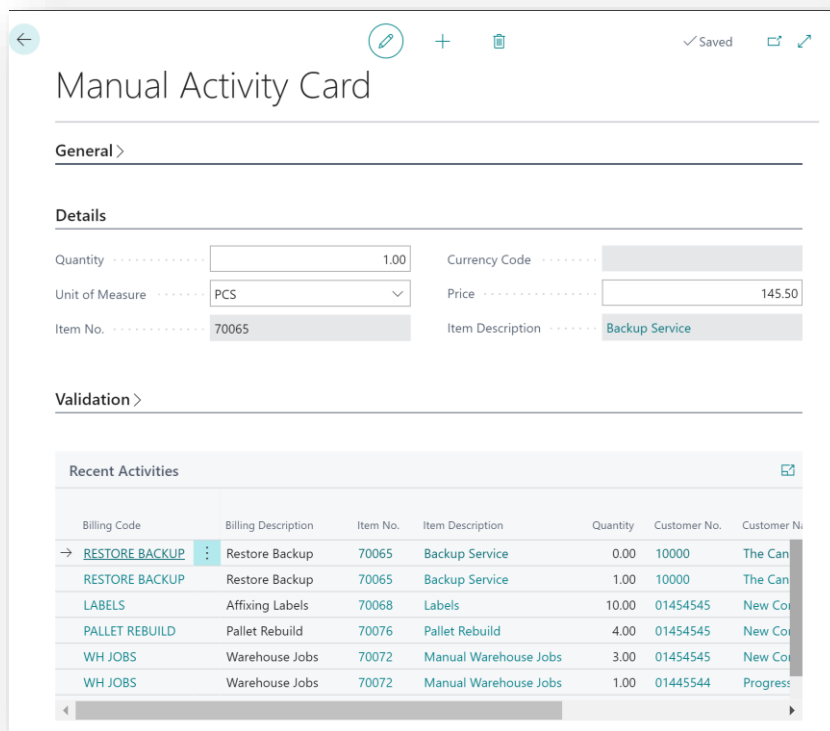
**Validation**

Validate Errors ..... "Quantity must be defined."

Figure 8-48

- **Validate Errors**– Displays any validation errors for the task that you are logging. E.g., if a quantity is not entered on the manual activity card, then a validation error will be displayed here.

The **Recent Entries** FastTab displays entries that were recently entered on the system. This is designed so users will see the last tasks logged to aid with avoiding duplicate entries and to help users avoid forgetting to log entries. The **Recent Entries** FastTab contains the fields described above with the addition of the following fields (*Figure 8-49*):



Manual Activity Card

**General** >

**Details**

Quantity ..... 1.00      Currency Code .....  
 Unit of Measure ..... PCS      Price ..... 145.50  
 Item No. .... 70065      Item Description ..... Backup Service

**Validation** >

**Recent Activities**

Billing Code	Billing Description	Item No.	Item Description	Quantity	Customer No.	Customer N
→ RESTORE BACKUP	Restore Backup	70065	Backup Service	0.00	10000	The Can
RESTORE BACKUP	Restore Backup	70065	Backup Service	1.00	10000	The Can
LABELS	Affixing Labels	70068	Labels	10.00	01454545	New Co
PALLET REBUILD	Pallet Rebuild	70076	Pallet Rebuild	4.00	01454545	New Co
WH JOBS	Warehouse Jobs	70072	Manual Warehouse Jobs	3.00	01454545	New Co
WH JOBS	Warehouse Jobs	70072	Manual Warehouse Jobs	1.00	01445544	Progress

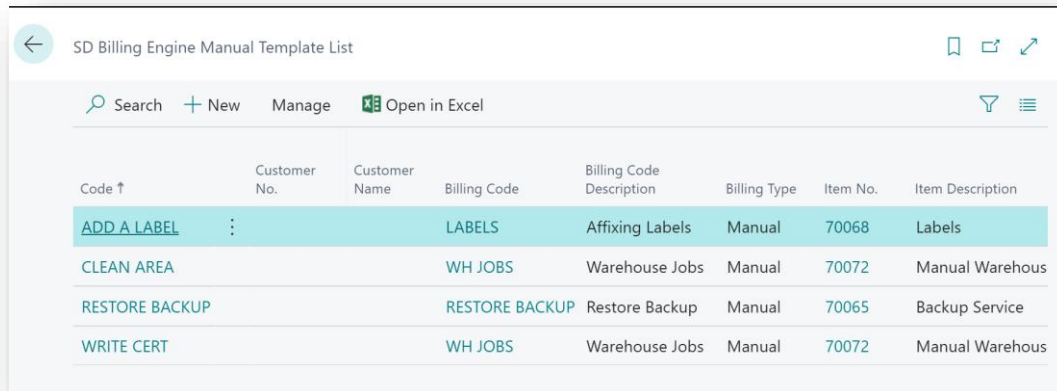
Figure 8-49

- **Created Date Time** – Displays the date/time that the event was logged.
- **Created User ID** – Displays the name of the user that logged the event.

## 8.10 Manual Template List

**Manual Template List** page, accessed from the **Manual Lines** list page, allows you create templates to log a manual task, using pre-defined values, easily and quickly.

The **Manual Template List** page contains the following fields (*Figure 8-50*):



Code ↑	Customer No.	Customer Name	Billing Code	Billing Code Description	Billing Type	Item No.	Item Description
ADD A LABEL	:		LABELS	Affixing Labels	Manual	70068	Labels
CLEAN AREA			WH JOBS	Warehouse Jobs	Manual	70072	Manual Warehouse
RESTORE BACKUP			RESTORE BACKUP	Restore Backup	Manual	70065	Backup Service
WRITE CERT			WH JOBS	Warehouse Jobs	Manual	70072	Manual Warehouse

*Figure 8-50*

- **Code** – Displays the user defined code for the template.
- **Customer No.** – Displays the customer no. that the template is created for. This can be left blank.
- **Customer Name** – Displays the name of the customer in **Customer No.**
- **Billing Code** – Displays the template's billing code.
- **Billing Description** – Displays the description for the billing code in **Billing Code**.
- **Billing Type** – Displays a billing type of **Manual**.
- **Item No.** – Displays the template's item code.
- **Item Description** – Displays the description for the item in **Item No.**
- **Quantity** – Displays the quantity to log.
- **Unit of Measure** – Displays the unit of measure to log.



- **Price** – Displays the price for the task.

To access an existing **Manual Template** from the **SD Billing Engine Manual Template List** page, from the action bar, in the **Manage** group, select **View**, or **Edit**. To create a new **Manual Template**, from the action bar, in the **New** group, select (Figure 8-51).

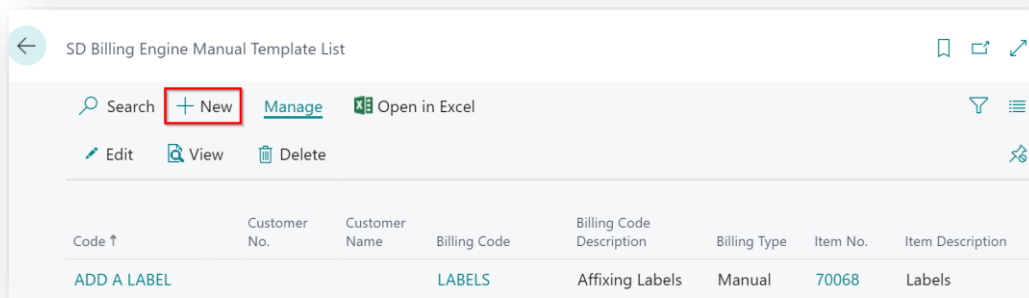
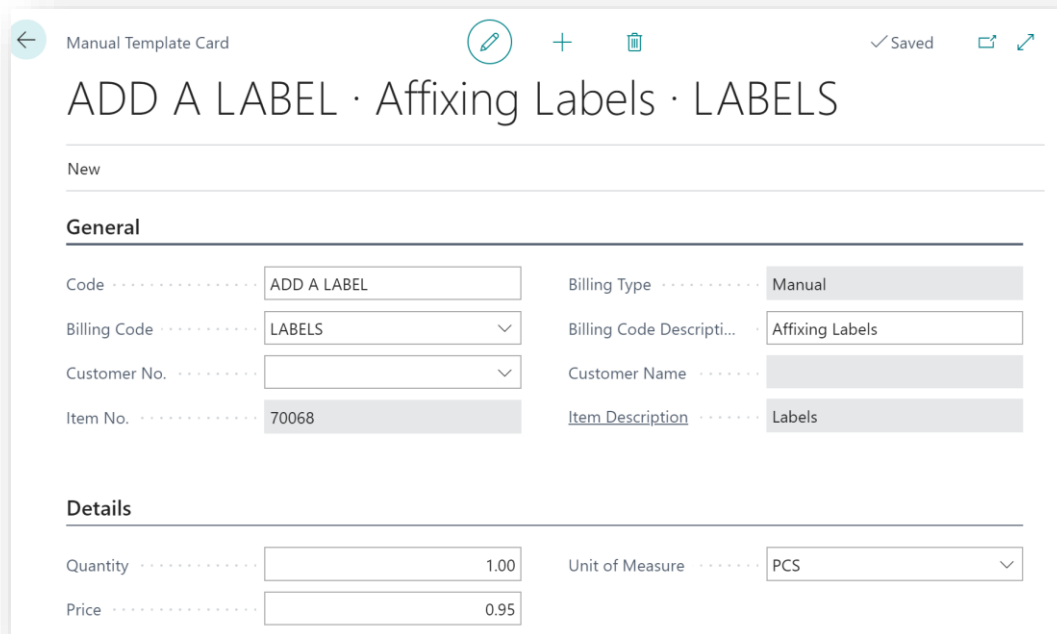


Figure 8-51

## 8.11 Manual Template Card

The **SD Billing Engine Manual Template Card**, accessed from the **SD Billing Engine Manual Template List**, allows you to create templates to log a manual event or task, using pre-defined values, easily and quickly and contains the following fields (*Figure 8-52*):



Manual Template Card

ADD A LABEL · Affixing Labels · LABELS

New

**General**

Code	ADD A LABEL	Billing Type	Manual
Billing Code	LABELS	Billing Code Descripti...	Affixing Labels
Customer No.		Customer Name	
Item No.	70068	Item Description	Labels

**Details**

Quantity	1.00	Unit of Measure	PCS
Price	0.95		

Figure 8-52

- **Code** – Enter a user defined code for the template.
- **Billing Type** – Displays a billing type of **Manual**.
- **Billing Code** – Enter a billing code for the template.
- **Billing Description** – Displays the description of the billing code in **Billing Code**.
- **Customer No.** – Select the customer no. that the template is created for. This can be left blank.
- **Customer Name** – Displays the name of the customer in **Customer No.**
- **Item No.** – Displays the template's item code.
- **Item Description** - Displays the description for the item in **Item No.**

- **Quantity** – Enter the quantity to log.
- **Price** – Enter the price to log.
- **Unit of Measure** – Enter the unit of measure to log.

## 8.12 Suggested Billing Lines

The **SD Billing Engine Suggested Billing Lines** list, is accessed from the **SD Billing Engine Role Centre**, by drilling through on the **Suggested Billing Lines** cue (*Figure 8-53*) or by searching for the page in the Tell Me.

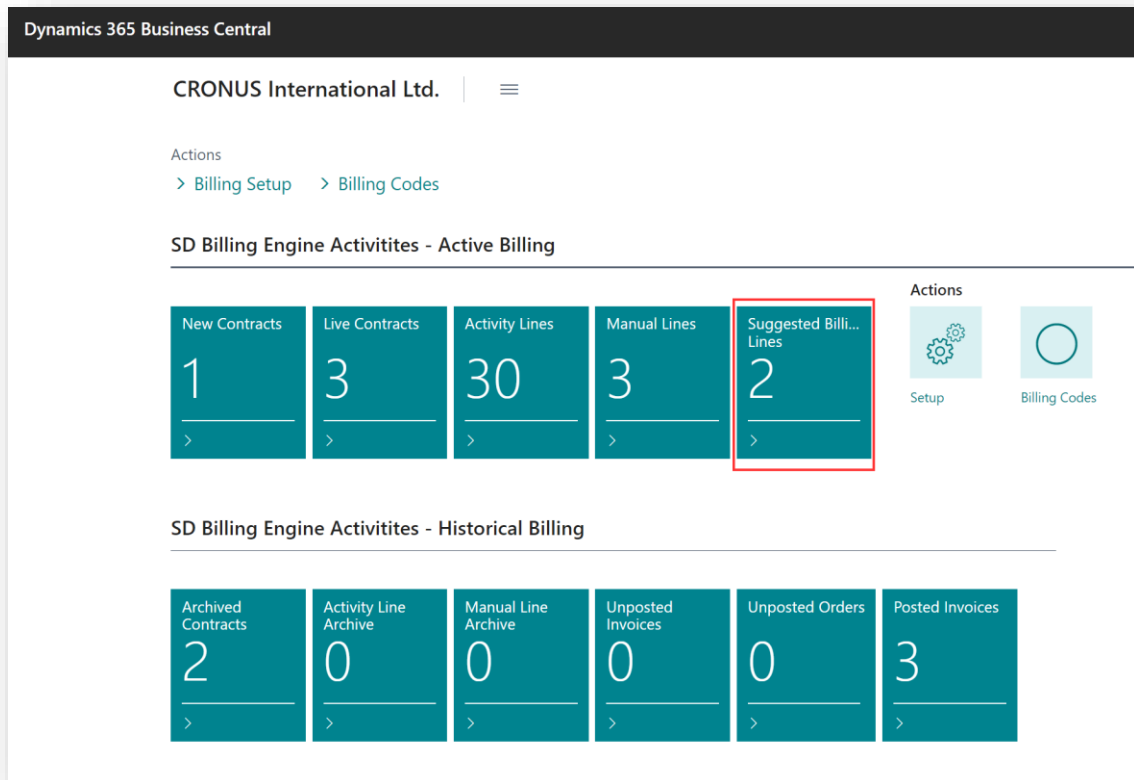


Figure 8-53

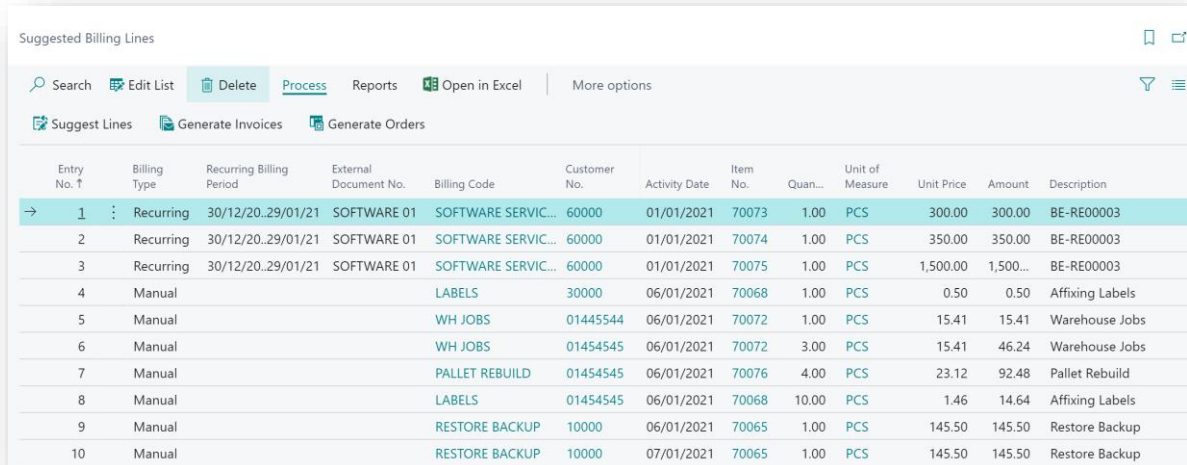
If there is no unit price on the contract line and the **Enforce Zero Contract Price** on the **SD Billing Engine Setup Card** is switched off, then the find best price logic is evoked in the suggest billing lines.

For contract lines, if the **Enforce Zero Contract Price** on the **SD Billing Engine Setup Card** is switched on, then the zero prices on the contract lines are used, rather than using the standard find best price functionality for the items on the contract lines with a zero price.

Otherwise, SD Billing Engine uses the price as entered on the contract line.

Consolidation of billing lines happens when the invoices are generated for the lines. Activity and manual lines are aggregated to a single line per billing code per customer per billing period. Recurring lines are not aggregated.

The **Suggested Billing Lines** list contains the following fields (*Figure 8-54*):



Entry No. ↑	Billing Type	Recurring Billing Period	External Document No.	Billing Code	Customer No.	Activity Date	Item No.	Quan...	Unit of Measure	Unit Price	Amount	Description
→ 1	Recurring	30/12/20..29/01/21	SOFTWARE 01	SOFTWARE SERVIC...	60000	01/01/2021	70073	1.00	PCS	300.00	300.00	BE-RE00003
2	Recurring	30/12/20..29/01/21	SOFTWARE 01	SOFTWARE SERVIC...	60000	01/01/2021	70074	1.00	PCS	350.00	350.00	BE-RE00003
3	Recurring	30/12/20..29/01/21	SOFTWARE 01	SOFTWARE SERVIC...	60000	01/01/2021	70075	1.00	PCS	1,500.00	1,500...	BE-RE00003
4	Manual			LABELS	30000	06/01/2021	70068	1.00	PCS	0.50	0.50	Affixing Labels
5	Manual			WH JOBS	01445544	06/01/2021	70072	1.00	PCS	15.41	15.41	Warehouse Jobs
6	Manual			WH JOBS	01454545	06/01/2021	70072	3.00	PCS	15.41	46.24	Warehouse Jobs
7	Manual			PALLET REBUILD	01454545	06/01/2021	70076	4.00	PCS	23.12	92.48	Pallet Rebuild
8	Manual			LABELS	01454545	06/01/2021	70068	10.00	PCS	1.46	14.64	Affixing Labels
9	Manual			RESTORE BACKUP	10000	06/01/2021	70065	1.00	PCS	145.50	145.50	Restore Backup
10	Manual			RESTORE BACKUP	10000	07/01/2021	70065	1.00	PCS	145.50	145.50	Restore Backup

Figure 8-54

- **Entry No.** – Displays the entry no. for the billing line.
- **Billing Type** – Displays the type of the billing line – **Recurring**, **Activity** or **Manual**.
- **Recurring Billing Period** – Applicable for billing lines of **Billing Type Recurring**. Displays the billing period for recurring billing lines.
- **External Document No.** – Applicable for billing lines of **Billing Type Recurring**. Displays the external document no. as entered on the contract card.
- **Billing Code** – Displays the billing code for the line.
- **Customer No.** – Displays the customer no. for whom the lines have been generated. The customer to be billed.
- **Activity Date** – For billing lines of **Billing Type Manual** or **Activity** this date can be edited.
- **Item No.** – Displays the item no for the billing line.

- **Item Description** – Displays the description for the item in **Item No.**
- **Quantity** – Displays the quantity for the line. For billing lines of Billing Type Recurring, this is the quantity as specified on the contract line. For billing lines of Billing Type Manual, this is the quantity as logged by the user when entering the manual activity line. For billing lines of Billing Type Activity, this is the quantity on the activity line.

For billing lines of Billing Type Manual or Activity this quantity can be edited.

- **Unit of Measure** – For billing lines of Billing Type Recurring, this is the unit of measure as specified on the contract line. For billing lines of Billing Type Manual, this is the unit of measure as logged by the user when entering the manual activity line. For billing lines of Billing Type Activity, this is the unit of measure on the activity line.
- **Unit Price** – Displays the unit price that the customer will be billed.

The find best price logic is evoked in the suggest billing lines. This allows users to have the correct price before generating invoices and removes the need for roll back of invoices after generation.

For contract lines, if the **Enforce Zero Contract Price** on the **SD Billing Engine Setup Card** is switched on, then the zero prices on the contract lines are used rather than using the standard find best price functionality for the items on the contract lines with a zero price.

- **Amount** – Displays the amount for the billing line.
- **Description** – Displays the description of the billing line. For billing lines of **Billing Type Recurring**, this is the contact no. For billing lines of **Billing Type Manual**, this is the billing code description.
- **Billing Date** – Applicable for billing lines of **Billing Type Recurring**. Displays the Billing Date.
- **Test Errors** – Applicable for all billing types. When the Suggest Lines action is selected, SD Billing Engine checks that the customer is not blocked and that the item is not blocked. If blocked, an error is stamped on the line.

The **Billing Totals** FactBox on the page displays the following fields (*Figure 8-55*):

Billing Totals	
All Lines	12
Total Amount	2,700.27
Zero Price Lines	0

*Figure 8-55*

- **All Lines** – Displays a count of all lines, irrespective of billing type, on the Suggested Billing Lines list.
- **Total Amount** – Displays the total amount of all lines, irrespective of billing type, on the Suggested Billing Lines list.
- **Zero Price Lines** – Displays a count of the lines on the page that have a zero price. This enables users to easily identify and rectify zero price lines.

The **Billing Lines** FactBox displays the following fields (*Figure 8-56*):

Billing Lines	
Breakdown by Customer	
No.	60000
Amount	2,240.00
Customer, Billing Type	
Amount	90.00
Customer, Billing Code	
Quantity	9.00
Amount	90.00
Billing Type	
Type	Manual
Amount	550.27
Billing Code	
Code	WH JOBS
Amount	151.65

*Figure 8-56*

### Breakdown by Customer

- **No.** – Displays the customer no. on the billing line.
- **Amount** – Displays the total amount for the customer on the billing lines.

### Customer, Billing Type

- **Amount** – Displays the total amount for the customer, for the billing lines with the billing type of the current billing line.

### Customer, Billing Code

- **Quantity**– Displays the total quantity for the customer, for the billing lines with the billing code of the current billing line.
- **Amount** – Displays the total amount for the customer, for the billing lines with the billing type of the current billing line.

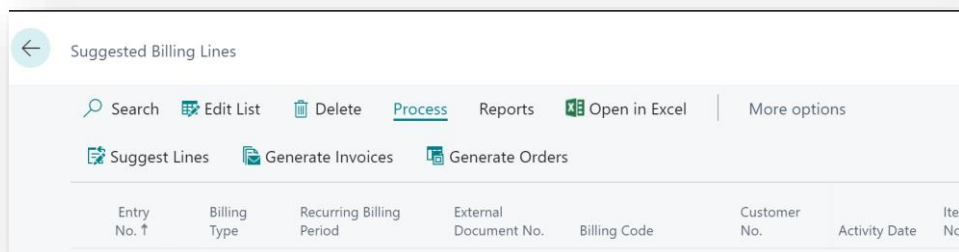
### Billing Type

- **Type** – Displays the billing type of the current billing line.
- **Amount** – Displays the total amount for the billing lines with the billing type of the current billing line.

### Billing Code

- **Code** – Displays the billing code of the current billing line.
- **Amount** – Displays the total amount for the billing lines with the billing code of the current billing line.

The **Suggested Billing Lines** page contains the following actions on the action bar's **Process** group (*Figure 8-57*):

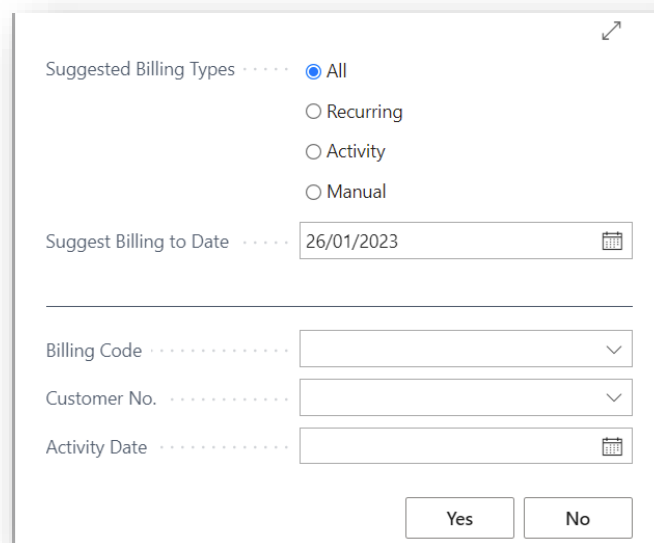


*Figure 8-57*



- **Suggest Lines** – Choose this action to suggest the lines that are due to be billed. If lines already exist user on the page, the user is prompted that the existing lines will be deleted.

When the **Suggest Lines** action is selected, the user can choose to run Suggest Lines for All, Recurring, Activity or Manual billing types. The Suggest Billing to Date is set to the work date by default. Users can also enter a billing code (to filter on a billing code), a customer code (if they want to restrict to a single customer run) and an activity date (used to filter manual and activity lines up to and including this date). (Figure 8-58).



The screenshot shows a dialog box titled "Suggest Lines" with the following fields and options:

- Suggested Billing Types**: Radio buttons for All (selected), Recurring, Activity, and Manual.
- Suggest Billing to Date**: Text input field containing "26/01/2023" with a calendar icon.
- Billing Code**: Dropdown menu.
- Customer No.**: Dropdown menu.
- Activity Date**: Text input field with a calendar icon.
- Buttons**: "Yes" and "No" buttons at the bottom.

Figure 8-58

If there are errors on the activity or manual lines, these lines will be skipped and will not be included in the suggested lines.

If the recurring, activity, or manual elements are not enabled on the SD Billing Engine Setup Card then the lines will be skipped.

For a Billing Type of Recurring, SD Billing Engine checks that the contract is active and that the contract has lines. Lines are then inserted into the suggest billing lines table. A check is run to test that the customer is not blocked. If the customer is blocked an error is stamped on the suggest billing lines. A check is run to test that the item is not blocked and if blocked an error is stamped on the suggest billing lines. If there is no unit price on the contract line and the **Enforce Zero Contact Price** on the SD Billing Engine Setup Card is switched off, then SD Billing Engine uses the sales order find best

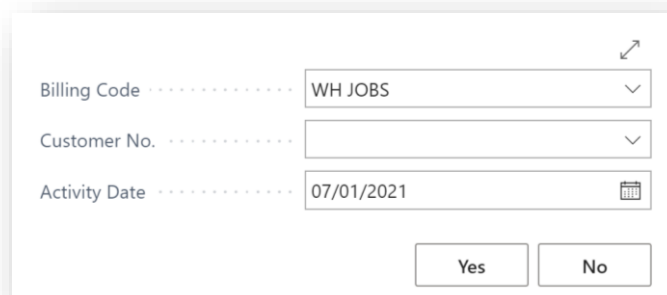
price routine for the zero price lines. Otherwise, SD Billing Engine uses the price entered on the contract line. Contract billing dates will not be updated until the suggest billing lines are converted to sales invoices.

For a Billing Type of Activity, SD Billing Engine checks that the customer is not blocked. If the customer is blocked, an error is stamped on the suggest billing lines. A check is run to test that the item is not blocked and if blocked an error is stamped on the suggest billing lines. If there is no unit price on the activity line, then SD Billing Engine uses the sales order find best price routine.

For a Billing Type of Manual, SD Billing Engine checks that the customer is not blocked. If the customer is blocked an error is stamped on the suggest billing lines. A check is run that the item is not blocked. If the item is blocked an error is stamped on the suggest billing lines. If there is no unit price on the manual line, then SD Billing Engine uses the sales order find best price routine.

- **Generate Invoices** – Choose this Action to generate unposted sales invoices for the suggested billing lines.

You can enter a specific billing code and/or customer number to filter down on the billing lines to be generated. You can also enter an activity date to stamp a date on the invoice (applicable for manual or activity lines) (*Figure 8-59*).

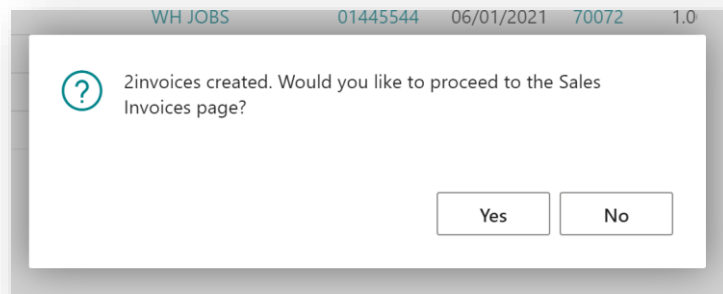


Billing Code .....	WH JOBS	↕
Customer No. ....		↕
Activity Date .....	07/01/2021	📅
<input type="button" value="Yes"/> <input type="button" value="No"/>		

Figure 8-59

For billing types of activity and manual, if the activity date is left blank, then today's date is used as the document date and the posting date on the invoice.

On choosing yes to generate invoices, a message is raised that x invoices have been created and you are prompted to navigate to the standard Microsoft Dynamics 365 Business Central Sales Invoices page (*Figure 8-60*).



*Figure 8-60*

For those invoices generated for recurring contracts, a text line is inserted on the invoice to denote the billing type of recurring.

For billing types of activity and manual, the lines will be aggregated if the billing code, customer, item, unit of measure and price are the same on the suggested billing lines.

The SD Billing Engine Setup is checked to determine if activity and/or manual lines are to be split onto separate invoices for the customer.

For activity lines and manual lines, once the invoice has been created and posted then the suggested billing lines are deleted and moved to the activity line archive (activity lines) or the manual lines archive (manual lines).

- **Generate Orders** – Choose this action to generate orders for the suggested billing lines.

**Note:** This action is applicable only if you are using SD Billing Engine to generate orders from an external source.

The **Suggested Billing Lines** page contains the following action on the action bar's **Reports** group (Figure 8-61):

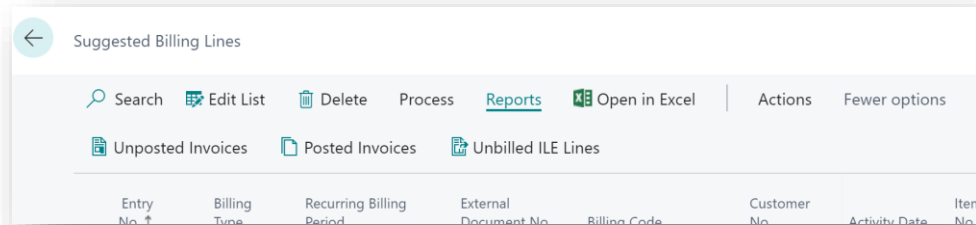


Figure 8-61

- **Unposted Invoices** – Choose this action to view the unposted sales invoices in your database. The standard Microsoft Dynamics NAV 365 Business Central Sales Invoice List is opened.
- **Posted Invoices** – Choose this action to view all posted sales invoices in your database. The standard Microsoft Dynamics NAV 365 Business Central Posted Sales Invoice List is opened.
- **Unbilled ILE Lines** – Choose this action to view the Item Ledger Entry lines that have not yet been billed by SD Billing Engine.

### 8.13 Contract Price Worksheet

The **SD Billing Contract Price Worksheet**, is accessed from the **SD Billing Engine Role Centre**, by drilling through on the **Contract Price Worksheet** cue (Figure 8-62) or by searching for the page in the Tell Me.

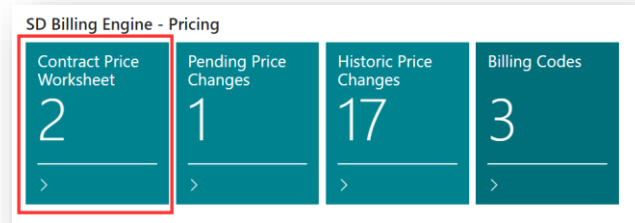
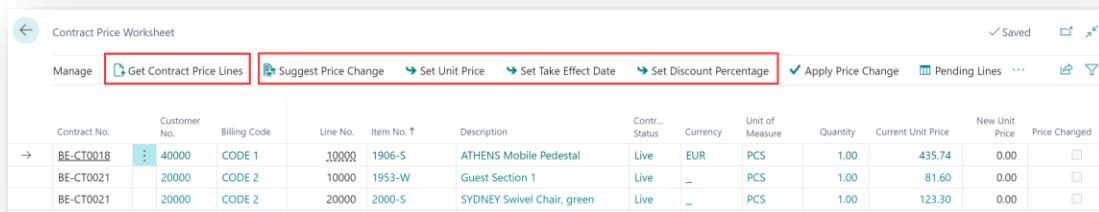


Figure 8-62

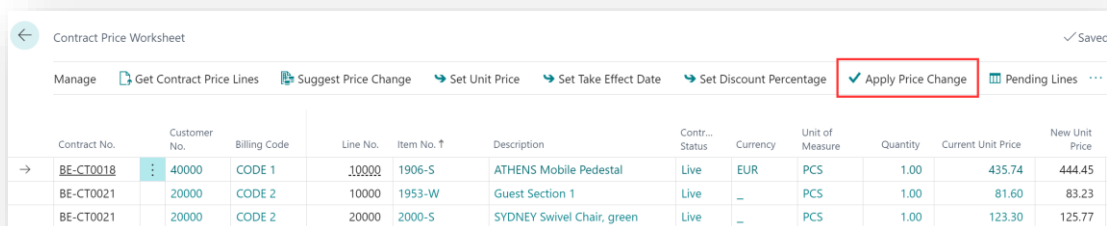
In the Contract Price Adjustment Worksheet, you choose the **Get Contract Price Lines** action to add the existing contract price lines to the Worksheet. Using the **Suggest Price Change**, **Set Unit Price**, **Set Take Effect Date** and **Set Discount Percentage** actions you can update the prices on the lines (Figure 8-63).



Contract No.	Customer No.	Billing Code	Line No.	Item No. ↑	Description	Contr... Status	Currency	Unit of Measure	Quantity	Current Unit Price	New Unit Price	Price Changed
→ BE-CT0018	40000	CODE 1	10000	1906-S	ATHENS Mobile Pedestal	Live	EUR	PCS	1.00	435.74	0.00	<input type="checkbox"/>
BE-CT0021	20000	CODE 2	10000	1953-W	Guest Section 1	Live	-	PCS	1.00	81.60	0.00	<input type="checkbox"/>
BE-CT0021	20000	CODE 2	20000	2000-S	SYDNEY Swivel Chair, green	Live	-	PCS	1.00	123.30	0.00	<input type="checkbox"/>

Figure 8-63

When you have updated your prices, choose the **Apply Price Changes** action. This transfers the lines to a **Pending Price Changes** list (Figure 8-64).



Contract No.	Customer No.	Billing Code	Line No.	Item No. ↑	Description	Contr... Status	Currency	Unit of Measure	Quantity	Current Unit Price	New Unit Price	Price Changed
→ BE-CT0018	40000	CODE 1	10000	1906-S	ATHENS Mobile Pedestal	Live	EUR	PCS	1.00	435.74	444.45	<input type="checkbox"/>
BE-CT0021	20000	CODE 2	10000	1953-W	Guest Section 1	Live	-	PCS	1.00	81.60	83.23	<input type="checkbox"/>
BE-CT0021	20000	CODE 2	20000	2000-S	SYDNEY Swivel Chair, green	Live	-	PCS	1.00	123.30	125.77	<input type="checkbox"/>

Figure 8-64

When the Suggest Lines on the next billing run is chosen, SD Billing Engine will apply all Pending Price changes that have a Take Effect Date less than or equal to the work date and within the Billing Period Range dates on the Contract.

You can view Historic Price Changes by drilling through on the **Historic Price Changes** cue in the **SD Billing Engine Role Centre** (*Figure 8-65*).

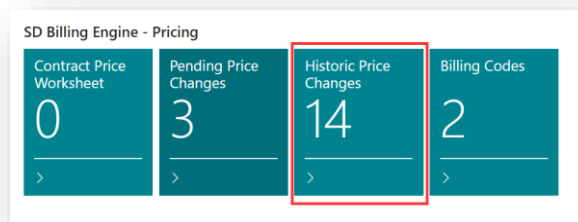


Figure 8-65



# Dynamics Shop

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