REPLENISHMENT SETUP

User Guide

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Contents

Conventions Used

This section interprets the various conventions used in the document for better understanding of the screen functionality.

Convention	Usage
	Denotes the mandatory fields in the screen. Values need to be specified in the fields in order to proceed with the screen operations.
	Denotes the fields that show values retrieved from the system.
	Any subject content encapsulated in a section marked by this icon indicates that the given information will serve as a useful tip for the end users.

1. Overview

This document spans through the various steps involved in Replenishment Control, Replenishment Parameter, Replenishment Preference and Replenishment Type Control.

Menu Access: ***Masters > Inbound > Replenishment Setup***

2. Pre-requisites

- Zone Group must be created.

3. Defining the frequency for generating Replenishment Requests

You can use the *Replenishment Control* screen to set controls at the Zone Group level for generating a replenishment request either automatically or manually. If the process is automatic, the frequency for generating a replenishment request has to be defined here.

Menu Access: ***Masters > Inbound > Replenishment Setup > Replenishment Control*** *(tab)*

Mandatory Values

1) Specify/select the **Zone Group** to be replenished.
2) Select a **Frequency Code** to define the timing for generating a replenishment request:
    - **Standard** – requests are generated at the default frequency configured at the building level.
    - **Hour**, **Days**, **Day of Week** – requests are generated at the specific time defined using these values.

Selecting NONE will stop automatic requests from being generated.

Optional Values

3) Select the **Replenish Process** Type for generating replenishment request.
    - **Normal** – indicates replenishment requests to be generated based on the method selected when setting up a slot location.
    - **Special** - indicates that a secondary replenishment method is defined and should be used to replenish slot locations within a Zone Group based on the associated frequency. An example of this is Lean Time replenishment.

Repl Method *control is enabled on selecting 'Special' from the Replenish Process Type list. Select the secondary replenishment method if using the Special Replenish process type.*

4) Select the severity level for processing a replenishment request in **Std Req Priority** (for inventory-based methods) and **Expedite Req Priority** (for demand-based methods)**.**

5) Choose any one of the options to generate replenishment request in **Gen Type** (Generate Type):

Auto – indicates the system will generate a replenishment request.

Manual – indicates a user will generate a replenishment request.

When Manual is selected, the Frequency Code field will be disabled.

6) Select the following checkboxes, if required:

- **Pref Across Zone Grp** (Preference Across Zone Group) – to pick the LPN from any preferred Zone group without considering the preference seq.
- **Cascade Req** (Cascade Request) – to create forward request for preferred Zone Group, when there is no inventory to pick and replenish.
- **Task Mix BU** - to combine replenishment request of different Business Units in a task.

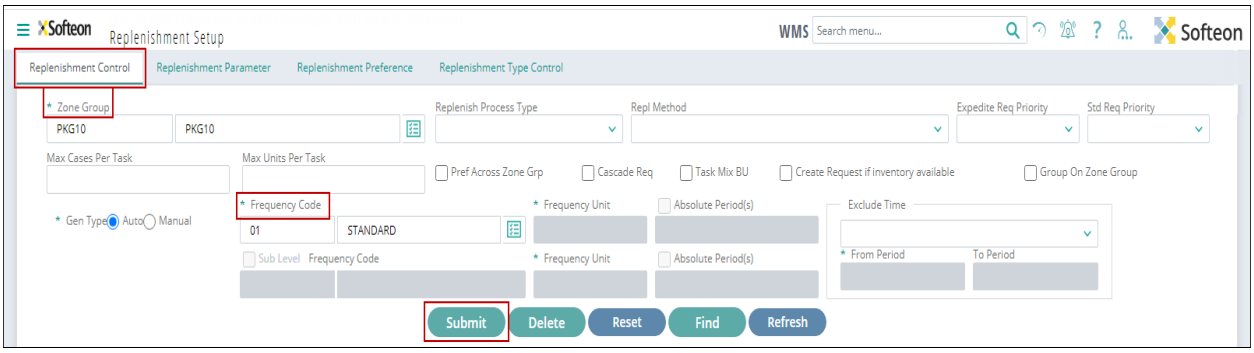

Figure 1 – Replenishment Setup – Replenishment Control screen

*On **Submitting**, the system displays the replenishment controls details in the grid.*

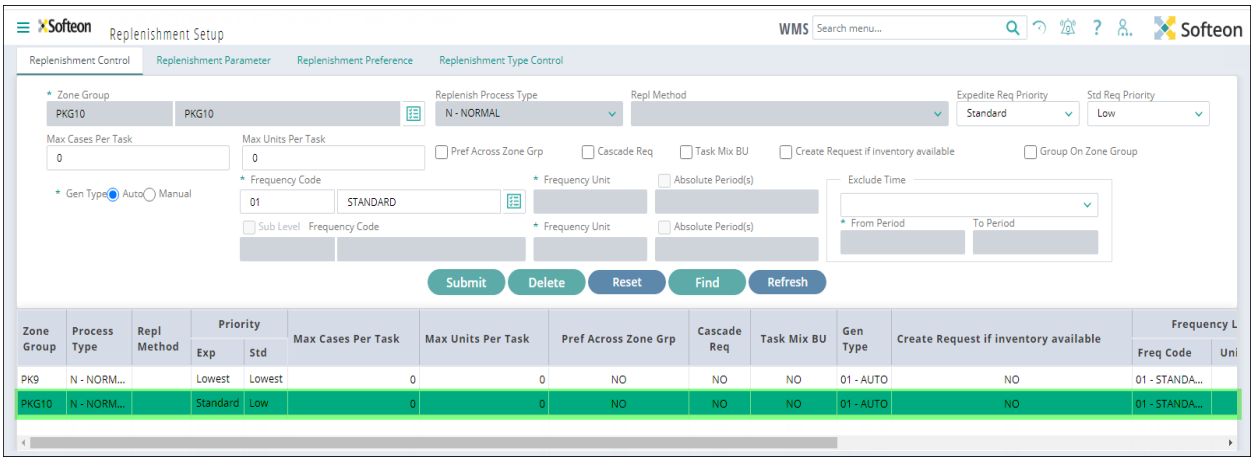

Figure 2 – Replenishment Setup – Replenishment Control screen – with records

4. Defining Replenishment Parameter for a SKU

You can use the *Replenishment Parameter* screen for defining slot locations and maintaining replenishment parameter settings for SKUs. When the inventory level of these SKUs goes below the defined replenishment level, a replenishment request is generated to refill up to the adequate inventory level.

Menu Access: ***Masters > Inbound > Replenishment Setup > Replenishment Parameter*** *(tab)*

Mandatory Values

1) Specify/select the **SKU** to which the replenishment parameter settings need to be defined.
2) Specify/select the Replenishment Location Details in **Aisle**, **Row** and **Tier** for the SKU during replenishment.

*On selecting a replenishment location, the system displays the corresponding replenishment **Zone Group** and **Zone** details.*

3) Choose either **in %** or **in Qty** (in percentage or quantity) and specify the value/quantity for the following inventory levels that the system should consider when maintaining the inventory in the specified pick pack location for the specified SKU.
    a. **Min Lvl** - the minimum SKU quantity recommended to be available in the slot location.
    b. **Max Lvl** - the maximum SKU quantity recommended to be available in the slot location.
    c. **Reorder Lvl** - the SKU quantity that has been defined for refilling inventory in the slot location. Reorder Level is an optional field that adds another control on when a replenishment request is created. In the case of demand-based replenishment strategies, it provides an additional replenishment trigger point for demand exceeding the maximum level.

Quantities entered need to correspond to the Inv Unit that has been defined for the slot location.

4) Under **Repl Unit Type**, select the check boxes of the required unit types: Pallets, Layers, Cases, and Units to specify whether the Inventory for the SKU must be picked in terms of Pallets, Layers, Cases, or Units from the warehouse location.

    For example:

    Consider the following settings:

    Cases per LPN are 10, Units per Case are 10, and Replenishment Request Quantity is ‘124’..

    - If the selected Repl. Unit Types are LPNs, Cases and Units, the system will suggest you to pick 10 LPNs, 2 cases and 4 units.
    - If the selected Repl. Unit Types are Cases and Units, the system will suggest you to pick 12 cases and 4 units.

Optional Values

5) Select the replenishment level from the **Repl Strategy** list, based on which the system will generate the replenishment request.

Replenishment Setup

Below is the list of replenishment levels and their functionalities.

Replenishment Level	Functions	Examples
01 - MIN LEVEL	Replenishment request will be generated when the inventory level (at the pick pack or target zone) goes below the specified minimum level quantity. **Repl**. **Request Qty** = Min Lvl qty - (Available Inv + Pending Request Qty)	If the **Min Lvl qty** = '50', **Available Inv** = '20', and **Pending Request Qty** = '10'. Repl. Request Qty = 50 – (20 + 10) In this case, **Repl**. **Request Qty** will be '20'.
02 – SUGGESTED LEVEL	Replenishment request will be generated when the inventory level (at the pick pack or target zone) goes below the result of specified suggested level quantity - standard reorder quantity (i.e. Current Inv < Sugg Lvl Qty - Reorder Qty). **Repl**. **Request Qty** = Sugg Lvl Qty - (Available Inv + Pending Request Qty)	If the **Suggested Lvl Qty** = '70', **Available Inv** = '20', and **Pending Request Qty** = '10'. Repl. Request Qty = 70 - (20 + 10) In this case, **Repl**. **Request Qty** will be '40'.
03 - MAX LEVEL	Replenishment requests will be generated when the inventory level (at the pick pack or target zone) goes below the specified maximum level quantity. **Repl. Request Qty** = Max Lvl Qty - (Available Inv + Pending Request Qty)	If the **Max Lvl Qty** = '150', **Available Inv** = '20', and **Pending Request Qty** = '10'. Repl. Request Qty = 150 – (20 + 10) **Repl. Request Qty** = 120

4 - FILL TO DEMAND	Replenishment request is generated when the order is placed for the SKU.
	Pending Demand Quantity = Order Qty – (Available Inventory + Pending Request Quantity)
	Case 1:
	If (Available Inv +**Pending Demand Qty** + Pending Request Qty) is **greater** than Max Lvl Qty.
	Repl. Request Qty = Max Lvl Qty – (Available Inv + Pending Req Qty)
	Case 2:
	If (Available Inv + **Pending Demand Qty** + Pending Request Qty) is less than Max Lvl Qty.
	Repl. Request Qty = Pending Demand Qty.
		If Pending Demand Quantity is '100', **Max Lvl Qty** = '150', **Available Inv** = '20', and **Pending Request Qty** = '10'
		((20+100+10)< 150))
		In this case, **Repl. Request Qty** = '100'

05 - FILL REORDER QTY	Replenishment request will be generated when the inventory level (at the pick pack or target zone) and pending request quantity reaches or goes below the specified minimum level quantity. **Repl. Request Qty** = Reorder Lvl qty	If the **Reorder Lvl** qty = '100', **Min Lvl** qty = '30', **Available Inv** = '20', and **Pending Request Qty** = '5'. Repl. Request Qty = 100 In this case, **Repl**. **Request Qty** will be '100'.
06 – MAX IF LT SUGG	Replenishment request will be generated based on the quantity mentioned in Max Lvl qty, if the inventory level (at the pick pack or target zone) is less than the suggested level. If available inventory is **less** than Suggested Lvl qty, **Repl. Request Qty** = Max Lvl qty - (Available Inv + Pending Request Qty)	If the **Suggested Lvl** qty = '70', **Max Lvl** qty = '150', **Available Inv** = '20', and **Pending Request Qty** = '10'. Repl. Request Qty = 150 – (20 + 10) In this case, **Repl**. **Request Qty** will be '120'.
07 - MAX IF LT MIN	Replenishment request will be generated based on the quantity mentioned in Max Lvl qty, if the inventory level (at the pick pack or target zone) is less than the minimum level. If available inventory is **equal to** or **less than** Min Lvl qty, **Repl**. **Request Qty** = Max Lvl qty - (Available Inv + Pending Request Qty)	If the **Min Lvl** qty = '50', **Max Lvl** qty = '150', **Available Inv** = '20', and **Pending Request Qty** = '10'. Repl. Request Qty = 150 – (20 + 10) In this case, **Repl**. **Request Qty** will be '120'.
08 – DEMAND/MAX	Replenishment request will be generated based on the Max Lvl Qty, when the order is placed for a SKU and Available Inv + Pending Request Qty + Reorder Lvl Qty Greater than Or Equal Zero. **Repl. Request Qty** = Max Lvl Qty – (Available Inventory +Pending Request Quantity)	If the **Max Lvl Qty** = '150' **Available Inv** ='20' and **Pending Request Qty** = '10' Repl. Request Qty = 150-(20+10) In this case, Repl. Request Qty will be '120'.
09 - DEMAND AND MAX	Replenishment requests will be generated based on the ordered quantity plus the Max Lvl Qty, when the order is placed for a SKU. Pending Demand Qty = Order Qty - ((Available Inv + Pending Request Qty) - Allocated Qty) **Repl. Request Qty** = Pending Demand	If the **Pending Demand Qty** = '100', **Max Lvl Qty** = '150', **Available Inv** = '20', and **Pending Request Qty** = '10'. Repl. Request Qty = 100 + (150 – (20 + 10))) In this case, **Repl. Request Qty** will be '220'.

	Qty + (Max Lvl Qty - (Available Inv + Pending Request Qty))	
10 - DEMAND GT MAX	**Case 1:** If Reorder Qty Greater than Zero and (Available Inv + Pending Demand Qty + Pending Request Qty) is less than Max Lvl qty then Replenishment request will be generated based on the order quantity **Repl. Request Qty** = Max Lvl qty - (Available Inv + Pending Request Qty) **Case 2:** If Reorder Qty Greater than Zero and (Available Inv + Pending Demand Qty + Pending Request Qty) is Greater than Max Lvl qty then Replenishment request will be generated based on the Max Lvl quantity **Repl. Request Qty** = Max Lvl qty - (Available Inv + Pending Request Qty) **Case 3:** If Reorder Qty Equals to Zero and Pending Demand Qty Greater than Zero, Replenishment request will be generated based on the order quantity irrespective of Max Lvl qty (i.e., whether the maximum level quantity is greater than or less than the order quantity), when the order is placed for a SKU. And the inventory will be placed at a single pick pack or target location though the inventory level exceeds the maximum capacity of the location. **Pending Demand Qty** = Order qty - (Available Inv + Pending Request Qty) **Repl. Request Qty** = Pending Demand Qty	If the **Max Lvl qty** = '150', **Available Inv** = '20', **Pending Request Qty** = '10', and **Pending Demand Qty** = '100' and **Reorder Qty** = 10. Repl. Request Qty = 100 In this case, **Repl. Request Qty** will be '100'. If the **Max Lvl qty** = '150', **Available Inv**= '20', **Pending Request Qty** = '10', and **Pending Demand Qty** = '130' and **Reorder Qty** = '10'. Repl. Request Qty = 150 - (20+10) In this case, **Repl. Request Qty** will be '120'. If the **Max Lvl qty** = '150', **Available Inv** = '20', **Pending Request Qty** = '10', and **Pending Demand Qty** = '200'. Repl. Request Qty = 200 In this case, **Repl. Request Qty** will be '200'.
11 - FILL TO DEMAND / MAX	Replenishment request will be generated based on the Order quantity or Max Lvl qty whichever is greater, when the order is placed for a SKU. And the inventory will be placed at a single pick pack or target location though the inventory level exceeds the maximum	If the **Max Lvl qty** = '150', **Available Inv** = '20', **Pending Request Qty** = '10', and **Pending Demand Qty** = '200'and **Reorder Lvl Qty** = '30'. Repl. Request Qty = Max Lvl qty - (Available Inv + Pending

	capacity of the location **(Case 1)**. **Pending Demand Qty** = Order qty - (Available Inv + Pending Request Qty) **Case 1:** If Reorder Lvl Qty is greater than Zero and (Available Inv + Pending Request Qty + Reorde Lvl Qty) **Repl. Request Qty** = Max Lvl qty - (Available Inv + Pending Request Qty) **Case 2:** If Reorder Lvl Qty is Equals to Zero and Pending Demand Qty is greater than (Max Lvl qty - (Available Inv + Pending Request Qty)), **Repl. Request Qty** = Pending Demand Qty **Case 3:** If Reorder Lvl Qty is Equals to Zero and Pending Demand Qty is less than (Max Lvl qty - (Available Inv + Pending Request Qty)), **Repl. Request Qty** = Max Lvl qty - (Available Inv + Pending Request Qty)	Request Qty In this case, **Repl**. **Request Qty** will be '120'. If the **Max Lvl qty** = '150', **Available Inv**= '20', **Pending Request** Qty = '10', and **Pending Demand Qty** = '200'. Repl. Request Qty = 200 In this case, **Repl**. **Request Qty** will be '200'. If the **Max Lvl qty** = '150', **Available Inv**= '20', **Pending Request Qty** = '10', and **Pending Demand Qty** = '100'. Repl. Request Qty = 150 - (20 + 10) In this case, **Repl**. **Request Qty** will be '120'.
12 - FILL TO MAX DEMAND	Replenishment request will be generated when the result value of inventory level (at the pick pack or target zone) - alloc Qty, goes below the specified minimum level quantity. **Repl. Request Qty** = Alloc Qty - (Available Inv + Pending Request Qty) + Max Lvl Qty	If the **Max Lvl qty** = '150', **Available Inv**= '20', **Pending Request Qty** = '10', and **Pending Demand Qty** = '200'and **Reorder Lvl Qty** = '30'. If the **Max Lvl qty** = '150', **Min Lvl qty** = '50', **Available Inv** = '20', **Pending Request Qty** = '10', and **Alloc Qty** = '15' Repl. Request Qty = 15 – (20 + 10) + 150 In this case, **Repl**. **Request Qty** will be '135'.

6) Select the **Loc Repl Mode** to generate replenishment requests on a permanent basis, until demand is met, for a single instance, or set to not replenish based on how the location will be used.

7) Select the **Allow Excess Qty** check box to allow warehouse operator to deliver more than the requested quantity to the Replenishment location.

Replenishment Setup

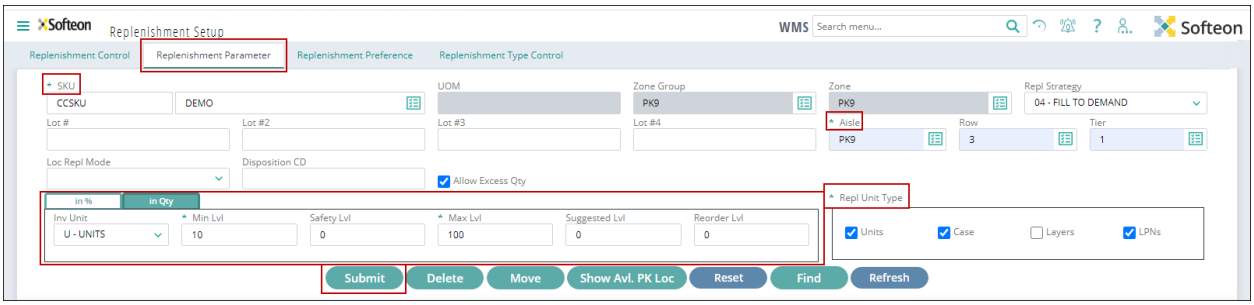

Figure 3 - Replenishment Setup – Replenishment Parameter screen

*On **Submitting**, the system generates and displays the **Param Ref ID** with specified details in the grid and displays the message, '**Pick Pack LPN created successfully**'. Click **OK**.*

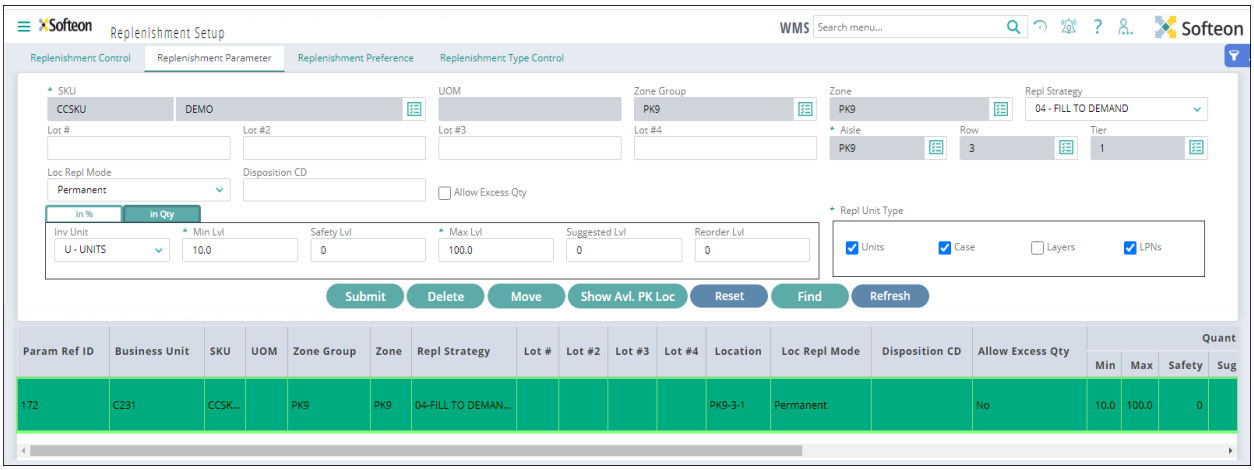

Figure 4 - Replenishment Setup – Replenishment Parameter screen – with records

*Click **Move** to move SKU to different locations.*

*Click **Show Avl. PK Loc** to view the empty pick pack locations in an Aisle.*

5. Defining the Replenishment Preference

You can use the *Replenishment Preference* screen for setting up the preferred Warehouse Zone Group from which SKUs must be picked for refilling a particular Pick Pack Zone group based on its pick type.

Menu Access: ***Masters > Inbound > Replenishment Setup > Replenishment Preference*** *(tab)*

Mandatory Values

1) Specify/select the **Zone Group** where the inventory needs to be replenished.
2) Select the **Pick Type** (Units, Cases, or Pallets) that corresponds to the **Replen Unit Type** assigned to SKUs in the selected Zone Group.

If multiple Replen Unit Types have been assigned to a Zone Group, a Replenishment Preference should be created for each type.

3) Under **SKU/SKU Group**, select either **SKU** or **SKU Group** to perform replenishment.
4) Under **Replenish From**, select **Zone Group** and its respective **Zone** where SKUs have to be picked for replenishment
5) Specify **Sort Seq No** to denote the sequential order in which the preferences must be processed.

Sort Seq No *must be greater than zero.*

Optional Values

6) If needed, the **Replen Pick Method** can be changed. The default method of **NA** indicates that the system will suggest picks for a replenishment task based on the tracking method that has been defined for a SKU in SKU profile (ex. FIFO), then the location relative sequence of the preferred zone group. Other options are:

- **Pick to Speed** - the system will suggest picking the requested quantity by location quantity, then the location relative sequence, and then FIFO.
  - I. If a location contains an on-hand quantity that is equal to the requested quantity, the system will suggest picking the requested quantity from that location first.
  - II. If a location contains an on-hand quantity that is greater than the requested quantity, the system will suggest picking the requested quantity from that location by giving it second priority.
  - III. If a location contains an on-hand quantity that is less than the requested quantity, the system will suggest picking the requested quantity from that location by giving it last priority.
- **Pick to Clean** - the system will suggest picking the requested quantity from locations with the least quantity first to clear locations, and then consider the location relative sequence, and then FIFO.

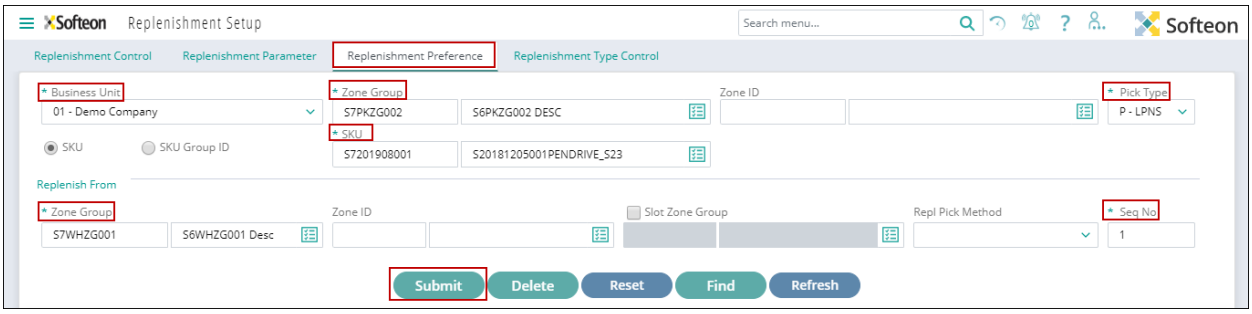

Figure 5 - Replenishment Setup – Replenishment Preference screen

*On **Submitting**, the system generates and displays the **Pref ID** with the specified details in the grid.*

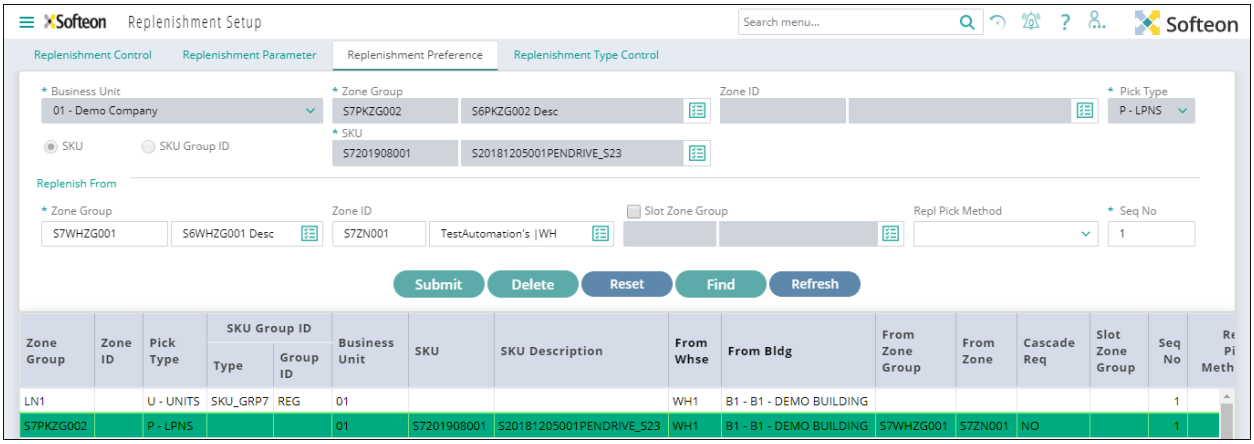

Figure 6 – Replenishment Setup – Replenishment Preference screen – with records

6. Configuring the control/field settings of Replenishment related RF screens

You can use the *Replenishment Type Control* screen for configuring the RF screen for the warehouse operator to perform replenishment.

During Replenishment, the system displays the replenishment screen in the RF - terminal based on the settings defined here.

Menu Access: ***Masters > Inbound > Replenishment Setup > Replenishment Type Control*** *(tab)*

Mandatory Values

1) Specify/select the **Zone group** to which the replenishment controls need to be configured.

Optional Values

2) Select the **Repl Unit type** (Replenishment Unit Type) for which replenishment type controls need to be configured.

> *If multiple Replen Unit Types have been assigned to a Zone Group, a record should be created for each type.*

3) Select the following checkboxes, if required:

- **Show Scan Sku** - to require the operator to scan the SKU ID.
- **Show Scan FromLoc -** to require the operator to scan the Scan From Loc.
- **Allow Zero Pick -** to allow the operator to pick zero quantity for the assigned Request. During zero pick, emergency cycle count will be triggered to audit the preferred location.
- **Mand Rsn Cd On Short Pick -** to mandate reason code when the operator picks less than the requested or available quantity

4) Select the **Stage Replenishment** check box to allow the operator to move the inventory to replenishment stage location first and then to the actual delivery location.

5) In the Stage Replenishment region, select the following check box, if required:

- **Scan Stage -** to scan the Stage Location.
- **Accept Cart -** to accept the Cart Id from the user in replenishment picking (RF) screen.

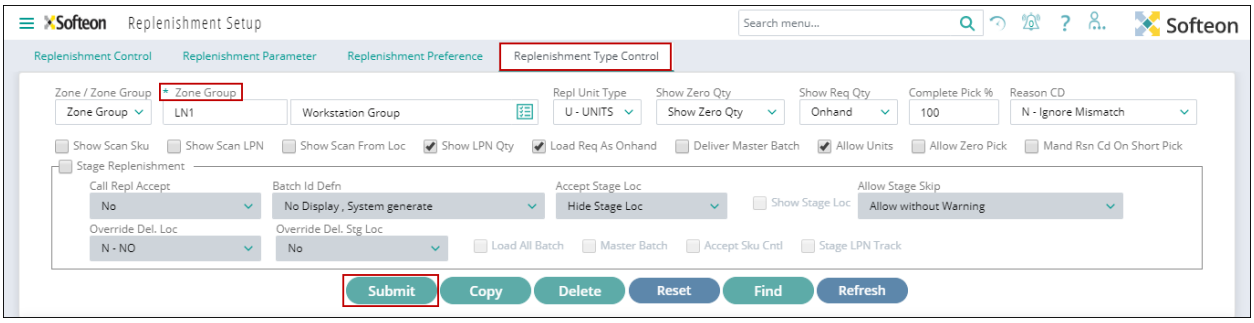

Figure 7 – Replenishment Setup – Replenishment Type Control screen

*On **Submitting**, the system displays the replenishment type control details in the grid.*

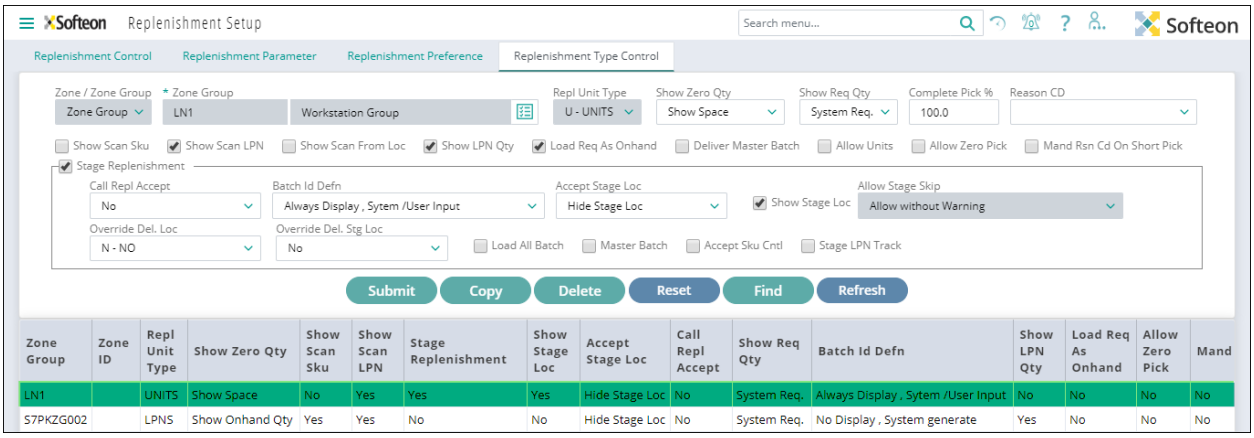

Figure 8 – Replenishment Setup – Replenishment Type Control screen – with records

7. What's Next?

- Navigate to *Empty Locations in Loc Type* screen for viewing the empty Locations of the respective Location Type.
- Navigate to *Replenishment Parameter Query* screen is used for filtering and viewing the replenishment parameters details.