

# Dynamic Modification of the Inspection Scope



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## Dynamic Modification of the Inspection Scope

### Purpose

You can determine the sample size for an inspection in the R/3 System in different ways. For example, you can use the data from past inspection valuations to calculate the current inspection scope. To be able to react flexibly to this data, you can dynamically modify the inspection scope. This can be achieved using sampling procedures and dynamic modification rules.

### Implementation Considerations

With respect to inspection characteristics and sample sizes, dynamic modification allows you to control the inspection scope for a series of inspection lots such that you will be able to achieve a predefined quality goal with a high degree of certainty. You can use the R/3 System to dynamically modify the inspection scope at different levels (for example, at the inspection lot level, characteristic level and inspection type level).

### Features

- At a specified point in time (for example, during lot creation or after the usage decision is made), the R/3 System determines the inspection stage(s) for the next inspection lot based on the predefined dynamic modification rule(s) and writes it to the data record as a quality level.
- Depending on the level at which dynamic modification occurs, the system determines the next inspection stage for each characteristic in a task list to which a dynamic modification rule is assigned (dynamic modification at characteristic level), for all characteristics in a task list (dynamic modification at lot level) or for a specific inspection type independent of the task list used (dynamic modification at inspection type level). For dynamic modification at lot level, you define dynamic modification in the task list header. For dynamic modification at inspection type level, you define it in the [inspection setup \[Ext.\]](#) of the material master for the inspection type.



It can be useful to use dynamic modification at inspection type level, if you want to use the same task list for several inspection types when you inspect with a task list. It is also useful, if you want to change from inspecting without a task list to with a task list without losing the current quality level.

- You always maintain the quality level for the material and plant. This is dependent on the defined dynamic modification level for the inspection type, task list or characteristics for the task list. You can also define other dynamic modification criteria to maintain the quality level, for example, during goods receipt inspections by vendor and/or manufacturer, or for goods issue inspections by customers.
- Depending on the dynamic modification level you have chosen, the dynamic modification valuation controls the following:
  - For the inspection characteristic - the stage change in the quality level for the inspection characteristic
  - For the inspection lot - the stage change for all characteristics in the quality level for the task list or the inspection type

**Dynamic Modification of the Inspection Scope**

- The R/3 System determines the current inspection stage from the quality level in order to calculate the inspection scope and defines the inspection specifications accordingly in the inspection instruction.

A stage change can cause a reduction or increase (tightening) in the inspection scope.

- As a rule the quality level is only updated on the basis of the dynamic modification valuation after the usage decision has been made for an inspection lot ([Dynamic Modification with the Usage Decision \[Page 31\]](#)). However, you can also update the quality level at lot creation ([Dynamic Modification at Lot Creation \[Page 27\]](#)). In this case, acceptance decisions are made for an outstanding inspection lot or outstanding inspection characteristics.



Dynamic modification at lot creation is useful, if several new inspection lots can be created, before you have completed the inspection of the first inspection lot.

- The conditions for a stage change are defined for each inspection stage in the dynamic modification rule. You can vary the sample size between a predefined inspection scope (for example, 100%) and a skip using the inspection stages. The inspection severity can change between a normal, reduced, and tightened inspection.



A skip means that a certain number of deliveries, lots, or characteristics are not inspected.

- During lot creation, the R/3 System reads the current inspection stage(s) for the quality level and uses this for sample determination.

**See also:**

[Sample Determination for an Inspection \[Ext.\]](#)

## Dynamically Modifying the Inspection Scope

### Purpose

You can determine the sample size for an inspection in the R/3 System in different ways. For example, you can use the data from past inspection valuations to calculate the current inspection scope.

Dynamic modification refers to the possibility of flexibly determining the inspection scope. The sampling procedure and [dynamic modification rules \[Page 12\]](#) provide the basis for dynamic modification.

For goods receipt inspections, goods issue inspections, and inspections during production, dynamic modification means:

- You can vary the sample size in stages between a predefined inspection scope (for example, 100%) and a skip. A skip means that a certain number of deliveries or lots are not inspected.
- The inspection severity can change between a normal, reduced, and tightened inspection.

The variation or change depends on past inspection results that are reflected in the current [quality level \[Page 24\]](#).

### Prerequisites

If you inspect with a task list, the system can dynamically modify the inspection scope at inspection lot level or characteristic level. You can also dynamically modify the inspection scope at inspection type level during an inspection without a task list, or with a task list (but independent of the task list).

For dynamic modification to be active, the following conditions must be met:

- In [Customizing \[Ext.\]](#), you have assigned [dynamic modification criteria \[Page 9\]](#) to the inspection lot origin.
- **Dynamic modification at the inspection type level**
  - You have defined the following in the [inspection setup \[Ext.\]](#) of the material master for the inspection type (quality management view):
    - An inspection with or without a task list or material specification
    - A dynamic modification rule
- **Dynamic modification at the lot or characteristic level**
  - You have:
    - Specified an inspection with a task list for the material and inspection type
    - Assigned a dynamic modification key to the task list usage



You define the proposed dynamic modification criteria for the task list usage in [Customizing \[Ext.\]](#). The dynamic modification keys are supplied as a part of the standard system and cannot be changed.

### Dynamically Modifying the Inspection Scope

- Assigned dynamic modification rules to the task list at the header or characteristic level, depending on which dynamic modification level (lot or characteristic level) you specified in the task list header
- Made sure that the indicator *Required characteristic* has been set for each characteristic that you want the system to dynamically modify (in the case of dynamic modification at the characteristic level).

### Process Flow

1. You define a sampling procedure in the basic data to determine how the system calculates the sample size and how it values the inspection characteristic.
2. When you carry out an inspection with a sampling scheme, you store sampling plans in the sampling scheme for the inspection severities (and AQL values, if necessary); you define the sample size in the sampling plans based on the size of the inspection lot.
3. You use the dynamic modification rule to specify which inspection stage should be used in an inspection (for example, normal, reduced, or tightened inspection, or a skip) based on the results of the last inspection.
4. When an inspection lot is created, the system determines the current inspection stage on the basis of the current quality level.
5. The system determines the current sample size on the basis of the current inspection stage in the quality level, the sampling procedure, and if necessary, the sampling scheme.
6. Depending on the time of dynamic modification that is defined in the dynamic modification rule, the system updates the quality level either when an inspection lot is created or when the usage decision is made.

**See also:**

[Sampling Procedure \[Ext.\]](#)

[Sampling Scheme \[Ext.\]](#)



## Dynamic Modification Criteria

### Definition

The dynamic modification criteria are key fields that the system uses to update the quality level. On the basis of these key fields, the system changes the sample sizes dynamically. Vendor, manufacturer, customer, and material are examples of dynamic modification criteria.

### Use

You define dynamic modification criteria for the inspection lot origin and in the task list at the same level as the [dynamic modification rule \[Page 12\]](#). The system uses the dynamic modification criteria that are common to both objects to maintain the [quality level \[Page 24\]](#).



The system only uses the dynamic modification criteria to update the quality level if the corresponding fields are filled in the inspection lot. In the task list usage, you can define a default value for the task list's dynamic modification criteria.

### Example: Selection of Dynamic Modification Criteria

The information below describes how the system determines the dynamic modification criteria on the basis of the inspection lot origin and inspection plan, when it creates an inspection lot.

#### Prerequisite

- Goods receipt (GR): The inspection lot origin has the dynamic modification criteria material and vendor.
- Goods Issue (GI): The inspection lot origin has the dynamic modification criteria material and customer.

#### Scenario 1

The task list contains the dynamic modification criteria material, vendor, and customer. This has the following effect:

- At goods receipt, the system maintains the quality level on the basis of the material and vendor.
- At goods issue, the system maintains the quality level on the basis of the material and customer.

#### Scenario 2

The task list contains the dynamic modification criteria material and vendor. This has the following effect:

- At goods receipt, the system maintains the quality level on the basis of the material and vendor.
- At goods issue, the system maintains the quality level on the basis of the material.

## Dynamic Modification Criteria

### Scenario 3

The task list specifies the material as the dynamic modification criterion. This has the following effect:

- At goods receipt, the system maintains the quality level on the basis of the material.
- At goods issue, the system maintains the quality level on the basis of the material.

## Structure

The dynamic modification criteria are permanently defined in the R/3 System and cannot be changed. All plausible combinations of the dynamic modification criteria material, vendor, manufacturer, and customer that can be assigned to the task list usage and inspection lot origin are supplied as keys with the R/3 System. In certain cases, dynamic modification criteria are not assigned (for example, for audit inspections).

### Example for Assigning Dynamic Modification Criteria

Task list usage	Criteria			
	Material	Vendor	Manufacturer	Customer
Production	X			
Engineering/ design				
Universal				
Plant maintenance				
Goods receipt	X	X	X	
GR model inspection	X	X	X	
Goods issue	X			X

## Time of Dynamic Modification

### Use

You use the time of dynamic modification to specify when the system should update the [quality level \[Page 24\]](#) (dynamic modification at lot creation or dynamic modification when the usage decision is made). You define the time of dynamic modification on the header data screen of the [dynamic modification rule \[Page 12\]](#).

### Integration

The dynamic modification process begins with the creation of an inspection lot. At this point, the system determines the quality level based on the [dynamic modification criteria \[Page 9\]](#) and dynamic modification level, in order to calculate the sample size using the current inspection stage. If a quality level does not yet exist, the system creates a new quality level, or it uses the quality level defined in the reference dynamic modification level in [Customizing \[Ext.\]](#).

### Features

#### Dynamic Modification at Lot Creation

For [dynamic modification at lot creation \[Page 27\]](#), the quality level is updated **when an inspection lot is created**. The system assumes that the forthcoming inspection will lead to an **acceptance** of the inspection lot or characteristic.

An inspection lot, which is created immediately after the quality level is updated, uses the information in the updated quality level without a usage decision having been made.

If dynamic modification is carried out at lot creation and the inspection lot is subsequently rejected, the system updates the quality level again when the usage decision is made. The new inspection stage is used by the system to calculate the sample sizes for the next inspection lot.



Changing the quality level does not affect inspection lots that were created in the meantime.

#### Dynamic Modification with the Usage Decision

For [dynamic modification with the usage decision \[Page 31\]](#), the system updates the quality level **when you make the usage decision**. At this point, the system evaluates the conditions for an inspection stage change based on the dynamic modification rule and, depending on the results of the current inspection, it determines whether or not the inspection stage should occur.

---

**Dynamic Modification Rule**

## Dynamic Modification Rule

### Definition

The basic data record contains the definition of the inspection stages, the dynamic modification time (at [lot creation \[Page 27\]](#) or after the [usage decision \[Page 31\]](#) has been made), and the conditions for the inspection stage change. Inspection stage changes occur on the basis of the inspection results that are recorded for inspection lots and inspection characteristics (that is, on the basis of their acceptance or rejection).

### Use

You can vary the inspection scope using dynamic modification rules. You can store a dynamic modification rule in one of the following places:

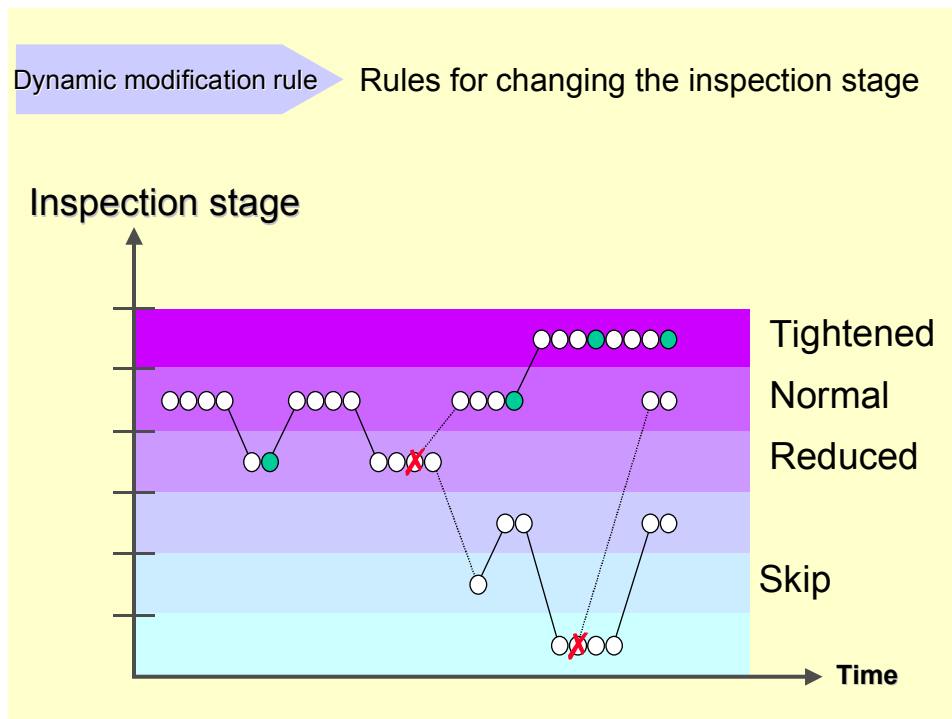
- In the inspection plan at the header level
- In the inspection plan at the characteristic level
- In the inspection setup of the material master record at the inspection type level

### Structure

A dynamic modification rule contains the definition of the inspection stages, the dynamic modification time, and the conditions that lead to an inspection stage change.

There are always two options that apply to the conditions for an inspection stage change: An acceptance (OK) and rejection (not OK). The system uses these conditions to update the [quality level \[Page 24\]](#), which always reflects the current status.

The following graphic clarifies the dynamic modification process.



The functions for maintaining and displaying dynamic modification rules are primarily contained on three screens:

- On the initial screen, you enter the identifier for the dynamic modification rule.
- On the header data screen, you maintain a short text and the blocking indicator, and define the [time of dynamic modification \[Page 11\]](#) (at lot creation or when the usage decision is made) and the reset period.



The reset period defines the period of time, which must elapse before the quality level again uses the initial inspection stage specified in the dynamic modification rule as the current inspection stage.

- On the inspection stages screen, you edit the inspection stage data (inspection severity, skip, initial inspection stage, and short text). You create the rules for the inspection stage change on this screen.



In QM, the inspection stage describes a test or inspection status that is based on the inspection history and predefined rules. Different inspection stages mean that there are also different inspection scopes and/or inspection severities.

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**Creating a Dynamic Modification Rule**

## Creating a Dynamic Modification Rule

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Dynamic modification rule* → *Create*.
2. Enter the identifier for the dynamic modification rule on the initial screen or choose *Copy* to use an existing dynamic modification rule as a copy model.
3. Choose *Dynamic modification rule* to carry out the following activities on the header data screen:
  - Edit the short text for the dynamic modification rule.
  - Define the [time of dynamic modification \[Page 11\]](#) (at lot creation or usage decision).
  - Define the reset period.
  - Set the blocking indicator if you want to prevent the dynamic modification rule from being used in an inspection plan.
4. Choose *Next screen* to carry out the following activities on the inspection stages screen:
  - Define inspection stages.
  - Define inspection severities for individual inspection stages.
  - Identify skips.
  - Identify the initial inspection stage.
  - Maintain short texts for the inspection stages.
5. Choose *Stage change* to carry out the following activities on the screen for creating the [inspection stage change \[Page 15\]](#):
  - Define the specifications for a stage change for an acceptance (OK)
  - Define the specifications for a stage change for a rejection (Not OK)
6. Choose *Next screen* to return to the inspection stages screen and save your entries.

When you save the data, the system prompts you for a confirmation. If you want to include the dynamic modification rule in the [allowed relationships \[Page 19\]](#) for sampling procedures and dynamic modification rules (this is only necessary if a sampling procedure is used in a sampling scheme), you can switch directly to the assignment transaction by confirming this prompt. You define the assignment of sampling procedures and dynamic modification rules in this screen.

If you do not confirm the prompt, the system returns directly to the initial screen and confirms that it has created the dynamic modification rule.

## Defining an Inspection Stage Change

### Use

For each inspection stage, you can define the conditions under which an inspection stage change occurs. The system always checks the conditions for the stage change and the potential stage change itself after the defined [dynamic modification time \[Page 11\]](#), at [lot creation \[Page 27\]](#), or after the [usage decision \[Page 31\]](#). There are always two cases that apply to the conditions for an inspection stage: An **acceptance** (OK) and a **rejection** (not OK).

In general, three possibilities exist:

- As soon as the predefined conditions for a rejection are met, the system switches to the new inspection stage specified for this case.
- As soon as the predefined conditions for an acceptance are met, the system switches to the new inspection stage defined for this case.
- If neither the conditions for an acceptance nor the conditions for a rejection are met, the system does not change the inspection stage.



The system first checks the condition for a rejection. If the condition for an inspection stage change with a rejection is not fulfilled, the system checks the condition for an acceptance.

Before you edit the conditions for a stage change, you must have entered all inspection stages in the inspection stages screen.

### Procedure

1. Select the inspection stage(s) on the inspection stages screen of the dynamic modification rule for which you want to define conditions for an inspection stage change and choose *Stage change*.
2. Edit the conditions for an acceptance and a rejection:
  - **Acceptance:** In the *No. of inspections* field, enter the number of inspections that must be completed before an inspection stage change can occur. In the *New inspection stage* field, enter the inspection stage to be used for the next inspection if the conditions for an acceptance are met.

In an inspection stage that corresponds to a **skip**, you can also specify a *maximum skip duration* in days for an acceptance (in addition to the *New inspection stage* and *No. of skips* that must occur before an inspection stage change can occur).



If the maximum skip duration is exceeded, a stage change always occurs at lot creation, independent of whether dynamic modification occurs at lot creation or at the usage decision. The new inspection stage is used for the current sample determination. As a result, the current inspection lot is regarded as the first inspection lot for the new inspection stage.

### Defining an Inspection Stage Change

- **Rejection:** In the *Rejections* field, enter the number of rejections that must occur before an inspection stage change takes place. You can overwrite the value **1** that is proposed by the system. In the *New inspection stage* field, enter the inspection stage to be used for the next inspection if the conditions for a rejection are met.



If the conditions for both an acceptance and a rejection apply at the same time, the system uses the conditions for the rejection to dynamically modify the quality level.

#### 3. Choose *Continue*.

- If you have selected **all** inspection stages, the system automatically displays the screen for editing the conditions for an inspection stage change in the next inspection stage. To return to a previous window, choose *Previous screen*.
- If you have selected **one** inspection stage, the inspection stages screen appears.

On this screen, you can have the system check your entries. To do this, choose *Edit* → *Check*.



The system sets the indicator *StC* for each inspection stage on the inspection stages screen for which you created a stage change.



## Editing the Dynamic Modification Rule

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Dynamic modification rule* → *Change*.
2. Enter the identifier for the dynamic modification rule on the initial screen and choose *Dynamic modification rule*.



Choose *Dynamic modification rule* → *Delete rule* to delete the rule and confirm that you want to delete the chosen rule.

- You can only delete a dynamic modification rule on the header data screen.
- You cannot delete a dynamic modification rule if it is being used. You can tell when a rule is in use when the indicator *Used in task list* is set.

You can display the change logs for all existing dynamic modification rules by choosing *Change logs*. You must have set the *recipient/client* parameter in the system profile to display the change logs.

3. Make the desired changes on the header data screen and choose *Next screen*.



You can display the data for creating and changing the dynamic modification rule by choosing *Administrative data* on the header data screen and the Inspection Stages screen.

4. Make the desired changes on the Inspection Stages screen and choose *Stage change*.
5. Make the required changes on the screen for changing the stage change and choose *Next screen* to return to the Inspection Stages screen.
6. Save your entries.

The system returns to the initial screen and confirms that the dynamic modification rule was changed or deleted.

---

**Deleting an Inspection Stage**

## Deleting an Inspection Stage

1. Go to the inspection stages screen in the dynamic modification rule.
2. Select the inspection stage(s) that you want to delete and choose *Edit* → *Delete*.  
The system informs you that any existing references to the inspection stages you are deleting will also be deleted.
3. To continue with the deletion process, choose *Continue*.  
The system displays a confirmation prompt for deleting the inspection stage.
4. To delete the inspection stage(s), confirm the prompt.  
The system deletes the selected inspection stage(s).



If you delete inspection stages, any conditions for an inspection stage change that have already been maintained will be incomplete. To see if this is the case, check the conditions by choosing *Edit* → *Check*.

## Maintaining Allowed Relationships

### Use

The allowed relationships contain combinations of sampling procedures that reference a sampling scheme and [dynamic modification rules \[Page 12\]](#). [Sampling procedures \[Ext.\]](#) without a sampling scheme are not relevant for allowed relationships.

When you make new entries for allowed relationships, the system checks for corresponding entries (sampling plans) in the related sampling scheme for all levels of inspection severity in the dynamic modification rule and for a possible AQL value in the sampling procedure.

You can only use combinations of dynamic modification rules and sampling procedures (with sampling schemes) in a task list that are stored as allowed relationships in QM.

### Procedure

1. Create and save a sampling procedure.  
The system displays a confirmation prompt.
2. If you want to include the sampling procedure in the allowed relationships for sampling procedures and dynamic modification rules, choose **Yes**.  
The system informs you that it has added the sampling procedure to the allowed relationships.
3. Choose *Continue*.  
The screen for editing allowed relationships between sampling procedures and dynamic modification rules appears.
4. Choose *Edit* → *New entries* and assign a dynamic modification rule to the sampling procedure.
5. Save your entries.  
The initial screen appears.

## Displaying the Use of Dynamic Modification Rules

## Displaying the Use of Dynamic Modification Rules

### Use

Dynamic modification rules can be referenced in task lists and in the inspection setup. The where-used list displays the task lists and inspection setup data, in which a code group is used.

### Procedure

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Dynamic modification rule* → *Where-used list*
2. On the initial screen, enter the dynamic modification rule.



Use the various selection options to limit your search and improve system performance.

3. Choose *Usage*.

If the dynamic modification rule is used in at least one task list or inspection setup, a usage overview appears which displays the following data:

- Name of the dynamic modification rule
- Key date
- Total number of times used, as well as the number of uses in task lists and the inspection setup
- Task list
- Task list description
- Dynamic modification level (*Lvl* column)
- Task list level (*Use* column), at which the dynamic modification rule is to be replaced.
- An X in the *A* column shows whether the dynamic modification rule that is to be replaced is active (this means that it is taken into consideration at dynamic modification).
- Operation number
- Characteristic number and characteristic description
- Master inspection characteristic
- Sampling procedure
- Key date (*Valid from*)



The data displayed corresponds to the usage overview that is currently selected (highlighted in color).

You can switch between the overview screens for the usage of dynamic modification rules in task lists or the inspection setup by clicking hotspots. There are different lists for the entries in the usage overview.

Displaying the Use of Dynamic Modification Rules

4. You can call up other functions from the usage overviews:

Overview	Function	Menu Path/Pushbutton
Task lists	Displaying usage for other dynamic modification rule	<i>Dynamic modification rule → Other dynamic modification rule</i>
	Replacing dynamic modification rule	<i>Dynamic modification rule → Replacement initial screen</i>
	Printing list	<i>Dynamic modification rule → Print</i>
	Downloading	<i>Dynamic modification rule → Download</i>
	Displaying dynamic modification rule	<i>Display dynamic modification rule pushbutton</i>
	Displaying plan data	<i>Display plan data pushbutton</i>
	Displaying usage in inspection setup	Hotspot
	Displaying a task list characteristic	Hotspot in table
	Displaying master inspection characteristic	Hotspot in table
	Displaying sampling procedure	Hotspot in table
Inspection setup	Displaying usage for other dynamic modification rule	<i>Dynamic modification rule → Other dynamic modification rule</i>
	Printing list	<i>Dynamic modification rule → Print</i>
	Downloading	<i>Dynamic modification rule → Download</i>
	Displaying usage in task lists	Hotspot
	Displaying sampling procedure	Hotspot in table
	Displaying dynamic modification rule	<i>Display dynamic modification rule pushbutton</i>
	Displaying inspection type	Hotspot in table
	Displaying usage in task lists	Hotspot in table

## Replacing Dynamic Modification Rules

## Replacing Dynamic Modification Rules

### Use

In the *Quality Management (QM)* application component, you can replace a dynamic modification rule that is used in task lists.

### Procedure

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Dynamic modification rule* → *Replace*
2. On the initial screen, enter the dynamic modification rule to be replaced (*Dynamic modification rule*) and the new dynamic modification rule (*New dynamic modification rule*). If necessary, use the input help.



Use the various selection options to limit your search and improve system performance.

3. Enter the required change key date, from which you want the replacement to take effect.



If you enter a change number, the date of this number is the key date, from which the replacement applies.

4. Choose *Usage*.

If the dynamic modification rule is used in at least one task list, the system displays a list of all task lists in which the modification rule to be replaced is used. The operation number, characteristic number and characteristic description, as well as a master inspection characteristic and a sampling procedure (if they exist), are given for each task list. In addition, the system displays the dynamic modification level and the task list level, where the dynamic modification rule was defined that is to be replaced (*Use* column). An *X* in the *A* column shows whether the dynamic modification rule that is to be replaced is active (this means that it is taken into consideration at dynamic modification).

5. Select the task lists, in which you want to replace the dynamic modification rule.
6. Define the [replacement mode \[Ext.\]](#) (optional).
7. Choose *Start*.



If you have not already defined the replacement mode, a dialog box appears, in which you can specify this mode.

8. To determine if the replacement was successful, check the [replacement log \[Ext.\]](#) (created automatically after the replacement is carried out).
9. You can call up other functions from the usage overviews:

Overview	Function	Menu Path/Pushbutton
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Replacing Dynamic Modification Rules

Task lists	Displaying usage for other dynamic modification rule	<i>Dynamic modification rule → Change dynamic modification rule</i>
	Displaying usage for dynamic modification rule	<i>Dynamic modification rule → Usage initial screen</i>
	Printing list	<i>Dynamic modification rule → Print</i>
	Downloading	<i>Dynamic modification rule → Download</i>
	Displaying change number	<i>Extras → Display change number</i>
	Displaying dynamic modification rule	<i>Display dynamic modification rule pushbutton</i>
	Displaying inspection plan data	<i>Display plan data pushbutton</i>
	Displaying replacement mode	<i>Settings pushbutton</i>
	Batch input	<i>Batch input pushbutton</i>
	Displaying usage in inspection setup	Hotspot
	Displaying a task list characteristic	Hotspot in table
	Displaying master inspection characteristic	Hotspot in table
	Displaying sampling procedure	Hotspot in table
Inspection setup	Displaying usage for other dynamic modification rule	<i>Dynamic modification rule → Change dynamic modification rule</i>
	Displaying usage for dynamic modification rule	<i>Dynamic modification rule → Usage initial screen</i>
	Printing list	<i>Dynamic modification rule → Print</i>
	Downloading	<i>Dynamic modification rule → Download</i>
	Displaying dynamic modification rule	<i>Display dynamic modification rule pushbutton</i>
	Displaying inspection type	<i>Display inspection type pushbutton</i>
	Displaying usage in task lists	Hotspot
	Displaying sampling procedure	Hotspot in table

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**Quality Level (QM-QC-AQC-LEV)**

## Quality Level (QM-QC-AQC-LEV)

### Definition

The quality level is a data record that the system automatically updates at the time of dynamic modification (at lot creation or when the usage decision is made), by checking the conditions for an inspection stage change and, if necessary, storing a new inspection stage for the next inspection.

### Use

The information in the quality level determines which inspection stage will be used for the sample determination of the next inspection lot.

The system updates the fields in the quality level differently during dynamic modification. This depends on whether dynamic modification occurs at lot creation or when the usage decision is made. You define which of these times will apply in the [dynamic modification rule \[Page 12\]](#).

### Structure

The following information (among other data) is contained in the quality level at the header or characteristic level:

- The number of inspections that have occurred since the last stage change.
- The number of inspections that were unsuccessful.

These counters are updated accordingly each time the quality level is updated. The system uses these counters to determine when an inspection stage change should occur. The conditions for a stage change are defined in the dynamic modification rule.



## Creating a Quality Level Manually

### Use

In most cases, you will not need to create a quality level manually. However, if you are implementing the *Quality Management* (QM) application component for the first time, you may want to enter data for the quality levels recorded in your previous system.

### Prerequisites

You can only create a quality level manually for lot-based dynamic modification.

### Procedure

1. Choose *Logistics* → *Quality management* → *Quality inspection* → *Quality level* → *Create*.
2. Enter the necessary data on the initial screen for creating a quality level and choose *Quality level*.



You define the [dynamic modification criteria \[Page 9\]](#) (material, vendor, manufacturer, or customer) and the inspection plan for which the quality level will be maintained on the initial screen.

3. Enter the following data on the screen for creating quality levels:
  - Next inspection stage
  - Number of inspections or inspection lots that (based on the dynamic modification valuation) have been completed since the last inspection stage change or were accepted without an inspection (skip)
  - Number of inspections or inspection lots (based on the dynamic modification valuation) that were rejected since the last inspection stage change
  - Reset date on which the quality level again uses the initial inspection stage (specified in the dynamic modification rule) as the current inspection stage
  - Earliest possible deletion date for the quality level



The system makes entries in all other fields if:

- An [inspection lot is created \[Ext.\]](#).
  - A [usage decision \[Ext.\]](#) is made.
4. Save your data.

The initial screen for creating a quality level appears and the system informs you that the quality level was created.

## Creating a Quality Level Manually

**Additional Functions on the Screen for Creating Quality Levels**

<b>Function</b>	<b>Pushbutton</b>	<b>What you should know</b>
Display material	Material	You can display the material for which the quality level is maintained.
Display task list	Task list	You can display the task list for which the quality level is maintained.
Display dynamic modification rule	Dynamic modification rule	You can display the dynamic modification rule for which the quality level is determined.

## Dynamic Modification at Inspection Lot Creation

### Use

The system updates the quality level for the current inspection lot during sample determination, if you set the indicator *Dynamic modification at lot creation* in the [dynamic modification rule \[Page 12\]](#).

### Integration

With *Dynamic modification at lot creation*, the system automatically values the inspection lot with an “acceptance”, increases the number of successful inspections by one, and checks whether the conditions for a stage change have been met. If this is the case, a stage change is made in the quality level, which then affects the next inspection lot. If the inspection lot is rejected during inspection lot processing, the system updates the quality level for an unsuccessful inspection after the usage decision has been made.



A subsequent change in the quality level does not affect inspection lots that were created in the meantime.

### Features

#### Updating the Quality Level (With Immediate Dynamic Modification)

When an **inspection lot is created**, two scenarios are possible:

Quality level does not yet exist	Quality level already exists
<p>The system creates a quality level. The system maintains the quality level on the basis of the criteria defined at the header or characteristic level of the inspection plan or for the inspection lot origin (if dynamic modification without a plan is specified).</p> <p>The quality level is maintained on the basis of the:</p> <ul style="list-style-type: none"> <li>• Plant</li> <li>• Material</li> <li>• Vendor, manufacturer, or customer</li> <li>• Inspection type</li> <li>• Task list type</li> <li>• Task list group</li> <li>• Group counter</li> </ul>	<p>The system:</p> <ul style="list-style-type: none"> <li>• Updates the inspection lot number using the current lot number</li> <li>• Automatically sets the field for the dynamic modification valuation to “accepted”</li> <li>• Increases the counter for the number of inspections that were accepted since the inspection stage change by one</li> <li>• Executes a stage change if the conditions for a stage change have been fulfilled; it then updates the counters</li> </ul>


**Dynamic Modification at Inspection Lot Creation**

<p>The system copies the initial inspection stage from the dynamic modification rule as the current inspection stage in the new quality level. If a reference dynamic modification level is active for the predefined dynamic modification level in <a href="#">Customizing [Ext.]</a> and a quality level exists for this level, the system copies the current inspection stage in the quality level of the reference dynamic modification level into the quality level and uses it as the initial inspection stage.</p>	
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**When the usage decision is made**, the system updates the *Dynamic modification valuation* field based on the dynamic modification level:

<p><b>At the lot level, or at the inspection type level with a task list</b></p>	<p><b>At the characteristic level</b></p>	<p><b>At the inspection type level without a task list</b></p>
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Dynamic Modification at Inspection Lot Creation

<p>The system determines the dynamic modification valuation automatically.</p> <p>It does this according to the worst-case principle: If at least one characteristic was rejected, the system rejects the inspection lot because of dynamic modification (it updates the quality level).</p> <p></p> <p>The worst-case principle is defined in a function module in <a href="#">Customizing [Ext.]</a>. You can replace the default values at client level using a customer-specific function module.</p>	<p>The system automatically changes the dynamic modification valuation for the characteristic to “rejected” in the following cases:</p> <ul style="list-style-type: none"> <li>• The characteristic is rejected during results recording.</li> <li>• The characteristic is accepted during results recording, but the number of defects for an attributive inspection lies between the acceptance number and rejection number (see ISO standard 2859, Rejection During a Reduced Inspection).</li> </ul>	<p>The system determines the dynamic modification valuation automatically.</p> <p>It does this on the basis of the usage decision code.</p>
<p>The system increases the counter for the number of inspections that were rejected since the inspection stage change by one.</p>		
<p>The system initiates a stage change if the conditions for a stage change have been fulfilled.</p>		
<p>The system updates the <i>Date of last inspection</i> field, if at least one characteristic was inspected. In the case of dynamic modification at the level of the inspection type without a task list, the system always updates the <i>Date of last inspection</i> field.</p>		



## Dynamic Modification with the Usage Decision

### Use

If you set the indicator *Dynamic modification at usage decision* in the [dynamic modification rule \[Page 12\]](#), the system updates the quality level for the current inspection lot when the usage decision is made.

### Integration

When the usage decision is made for the current inspection lot, the system updates the quality level based on the dynamic modification rule.

### Features

#### Updating the Quality Level (Dynamic Modification with the Usage Decision)

When an **inspection lot is created**, two scenarios are possible:

Quality level does not yet exist	Quality level already exists
<p>The system creates a quality level. The system maintains the quality level on the basis of the criteria defined at the header or characteristic level of the inspection plan or for the inspection lot origin (if dynamic modification without a plan is specified).</p> <p>The quality level is maintained on the basis of the:</p> <ul style="list-style-type: none"> <li>• Plant</li> <li>• Material</li> <li>• Vendor, manufacturer, or customer</li> <li>• Inspection type</li> <li>• Task list type</li> <li>• Task list group</li> <li>• Group counter</li> </ul>	<p>The system:</p> <ul style="list-style-type: none"> <li>• Updates the inspection lot number using the current lot number</li> <li>• Increases the counter “Inspections since stage change” for inspection lots without a usage decision by one.</li> </ul>
<p>The system copies the initial inspection stage from the dynamic modification rule as the current inspection stage in the new quality level. If a reference dynamic modification level is active for the predefined dynamic modification level in <a href="#">Customizing [Ext.]</a> and a quality level exists for this level, the system copies the current inspection stage in the quality level of the reference dynamic modification level into the quality level and uses it as the initial inspection stage.</p>	


**Dynamic Modification with the Usage Decision**

**When the usage decision is made**, the system updates the quality level based on the dynamic modification level:

<b>At the lot level, or at the inspection type level with a task list</b>	<b>At the characteristic level</b>	<b>At the inspection type level without a task list</b>
The system stores the number of the current inspection lot in the field for the inspection lot number.		
The system stores the valuation of the inspection lot (acceptance or rejection) in the field for the usage decision for the inspection lot.		
It reduces the counter for inspection lots without a usage decision by one.		



Dynamic Modification with the Usage Decision

<p>The system determines the dynamic modification valuation automatically.</p> <p>It does this according to the worst-case principle: If at least one characteristic was rejected, the system rejects the inspection lot because of dynamic modification (it updates the quality level).</p> <p></p> <p>The worst-case principle is defined in a function module in <a href="#">Customizing [Ext.]</a>. You can replace the default values at client level using a customer-specific function module.</p>	<p>The system automatically changes the dynamic modification valuation for the characteristic to "rejected" in the following cases:</p> <ul style="list-style-type: none"> <li>• The characteristic is rejected during results recording.</li> <li>• The characteristic is accepted during results recording, but the number of defects for an attributive inspection lies between the acceptance number and rejection number (see ISO standard 2859, Rejection During a Reduced Inspection).</li> </ul> <p>The system updates the field for the <b>valuation</b> of the characteristic.</p>	<p>The system determines the dynamic modification valuation automatically.</p> <p>It does this on the basis of the usage decision code.</p>
<p>The system increases the counter for the number of inspections that were rejected since the inspection stage change by one.</p>		
<p>The system increases the counter for the number of inspections that were accepted since the inspection stage change by one.</p>		
<p>The system initiates a stage change if the conditions for a stage change have been fulfilled.</p>		

**Dynamic Modification with the Usage Decision**

The system updates the *Date of last inspection* field if at least one characteristic was inspected. In the case of dynamic modification at the level of the inspection type, the system always updates the *Date of last inspection* field.

## Deletion of Quality Levels

### Use

The quality level contains information that is continuously updated and that always reflects a temporary status. Depending on your requirements, this table may contain many entries that are no longer needed (for example, if supply relationships were deleted or if the quality level is now maintained for characteristics instead of inspection lots). Using the deletion program for quality levels, you can delete quality levels for which the deletion date has been reached or exceeded. The selection of the entries to be deleted is controlled in the R/3 system by the quality level deletion date, which specifies the earliest date the quality level record can be deleted.



You can manually exclude individual quality levels from being deleted by setting the deletion date in the transaction *Change quality level* in the future.

### Integration

Whenever you create or change a quality level record without using the transaction *Change quality level*, the system automatically calculates the deletion date for the quality level. You can change the calculated deletion date manually at any time using the transaction *Change quality level*.

### Prerequisites

The parameter *Expiry period (days) for quality level* in [Customizing \[Ext.\]](#) for archiving QM data defines the number of days that must be exceeded after the quality level was last changed (automatically or manually), before the system can delete the quality level using the deletion program.

### Features

As soon as the deletion date for the quality level has been reached or exceeded, the quality level can be deleted using the corresponding deletion program.

The deletion program first selects all records that do not specify a quality level deletion date. It then calculates the deletion date and modifies the records to include the new deletion date. (The system uses the value specified for the parameter *Expiry period (days) for quality level* in Customizing to calculate the deletion date.) The system then deletes all records from the database that meet the selection criteria and for which the deletion date has been exceeded.



With characteristic-based dynamic modification, the system can delete quality levels for individual characteristic records after executing the deletion program, although other quality levels still exist for the same task list and dynamic modification criteria.

You can also delete a quality level record manually at any time (including all characteristic records) using the transaction *Change quality level*.

Quality levels that have been deleted can no longer be evaluated (that is, you can no longer obtain a [dynamic modification history \[Page 37\]](#) for the inspection lots that were included in these quality levels).

## Deletion of Quality Levels

### Activities

- Choose *Logistics* → *Quality management* → *Quality inspection*.
  - *Quality level* → *Delete* → *Trigger manually* to start the deletion program manually.
  - *Quality level* → *Delete* → *Job planning* to execute the deletion program as a [planned job \[Ext.\]](#).
  - *Quality level* → *Delete* → *Job overview* to display an overview of the planned deletion jobs.
- You enter the required selection criteria and run the program.



If you set the indicator *Reset date lies bef. del. date*, the system only selects the quality levels for deletion that fulfill this condition. Otherwise, the system does not take the reset date into consideration.

If a deletion date is not specified for the selected quality levels, the deletion program calculates the deletion date on the basis of the quality level expiry period that has been predefined in Customizing.

If you want to display a list of the quality levels that can be deleted before you make the deletions, you must set the indicator *Test run* to start the program in the test mode.



If you execute this report without setting the *Test run* indicator, the system automatically deletes the selected quality levels in the background. You cannot cancel the operation.

- The program creates a configurable list of the deleted quality levels (or in the case of the test mode, the quality levels that can be deleted) as a log. The list header contains additional information concerning the execution mode, the number of deleted quality levels, and administrative data.
- You print, export, or send the created list.

## Evaluation of Quality Levels

### Use

You can use this function to can select quality levels, display the selected quality levels in a list, reset or tighten selected quality levels, display the data and dynamic modification rules for selected quality level records, and display the dynamic modification history for quality levels as a graphic or in a list.



Quality levels that have been deleted can no longer be evaluated (that is, you can no longer obtain a dynamic modification history of the inspection lots that were included in these quality levels).

### Features

If the system finds more than one quality level record for the selection conditions, it switches to a dynamic selection list that contains all quality levels that meet the selection conditions.



If only one quality level exists for the selection criteria, the system switches directly to the dynamic modification history list for the corresponding quality level. The dynamic selection list appears by choosing *Goto* → *Back*. You can make changes in this list. There are the following functions in the dynamic selection list:

In the transaction <b>Edit list</b> (menu path: <i>Logistics</i> → <i>Quality management</i> → <i>Quality inspection</i> → <i>Quality level</i> → <i>Edit list</i> )	In the transaction <b>Display list</b> (menu path: <i>Logistics</i> → <i>Quality management</i> → <i>Quality inspection</i> → <i>Quality level</i> → <i>Display list</i> )	Pushbutton
<b>Reset quality level:</b> Regardless of the dynamic modification level (inspection type level, lot level, or characteristic level), you can use this function to change the inspection stage to the initial stage specified in the dynamic modification rule.	-	<i>Reset</i>
<b>Tighten quality level:</b> Regardless of the dynamic modification level (inspection type level, lot level, or characteristic level), you can use this function to change the inspection stage to the stage for a rejection.	-	<i>Tighten</i>
<b>Display dynamic modification rule</b>	<b>Display dynamic modification rule</b>	<i>Dynamic modification rule</i>
<b>Display quality level</b>	<b>Display quality level</b>	<i>QLevel</i>

**Evaluation of Quality Levels**

<p><b>Display dynamic modification history:</b> Depending on the dynamic modification level (inspection type level, lot level, or characteristic level), the system displays all inspection lots or inspection characteristics (if dynamic modification occurs at the characteristic level) for the selected quality level record with their respective inspection stage. The information is displayed chronologically in the form of a dynamic list.</p>	<p><b>Display dynamic modification history:</b> Depending on the dynamic modification level (inspection type level, lot level, or characteristic level), the system displays all inspection lots or inspection characteristics (if dynamic modification occurs at the characteristic level) for the selected quality level record with their respective inspection stage. The information is displayed chronologically in the form of a dynamic list.</p>	<p><i>Dynamic modification history</i></p>
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When you save the data, the system makes the desired changes to the quality level.

You can only change a quality level record once without exiting the change transaction.

If the system finds only one quality level record for the selection conditions, it immediately switches to the dynamic list for the quality level's dynamic modification history.

Functions in the quality level's dynamic modification history list (transactions *Change data* and *Display data*):

Function	Pushbutton
Display inspection lot specifications	<i>Inspection lot</i>
Display usage decision for selected inspection lot	<i>UD</i>
Display inspection characteristic results for selected inspection lot	<i>Characteristics</i>
Display details for quality level	<i>QLevel</i>
Display dynamic modification rule for selected inspection lot	<i>Dynamic modification rule</i>
Display inspection severities graphically (lot-based)	<i>Inspection lots</i>
Display inspection severities graphically (time-based)	<i>Time</i>