

### 1. Introduction

The ComGage test step function *Output of a XY / Scanning / F/D-diagram* allows the display of measuring values as XY / Scanning / Force/Displacement diagram ( F/D diagram ).

#### Important notes :

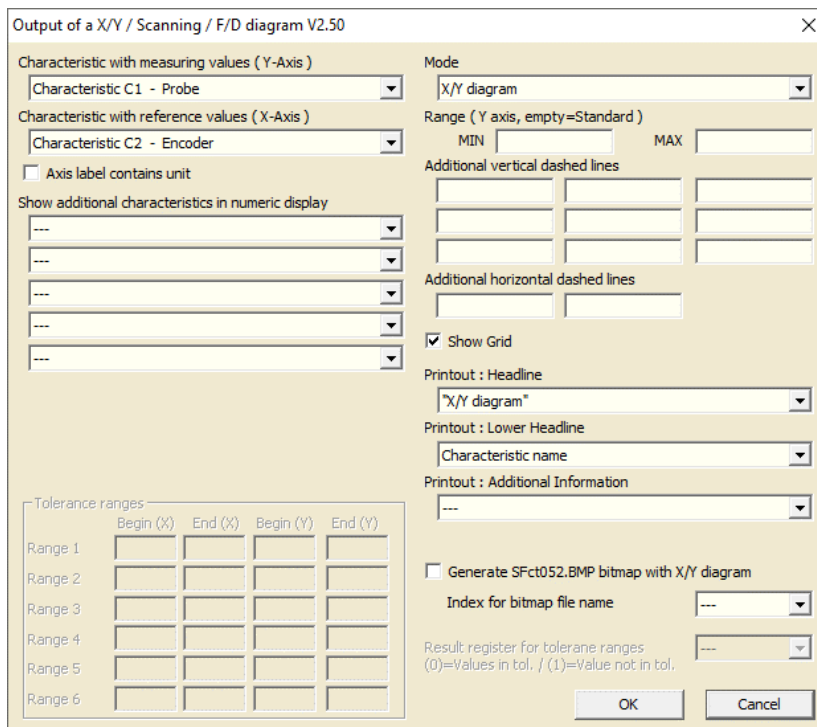
- This test step function can only be executed in a ComGage test order !
- The software license 72 is required for this test step function !

### 2. Notes on using the function

- One characteristic has to be created for the values of the X-axis.  
( Name of the characteristic = X-axis labelling )
- One characteristic has to be created for the values of the Y-axis.  
( Name of the characteristic = Y-axis labelling )  
→ Tolerances of this characteristic are displayed in the diagram.
- Before the start of a new measurement, the saved values of the two characteristics above have to be deleted. The test step function “Delete all measured values” can be used.
- To collect the values for the curve to be displayed, the test step function “Save measured values” can be used e.g. with a timer.
- After collecting the measuring values, the test step function “Output of a X/Y / Scanning / F/D diagram” can be used to display the diagram. The test step function provides several options for the configuration. These options are explained in the following chapter.

### 3. Configuration

The test step function is created within a test step. By clicking the *Setup* button, the following dialogue will be opened :



This dialogue allows to configure the following settings :



### **Characteristic with measuring values ( Y-axis )**

The characteristic with the saved measuring values ( Y-axis ) has to be selected.

### **Characteristic with reference values ( X-axis )**

The characteristic with the saved reference values ( X-axis ) has to be selected.

### **Axis label contains unit**

If this option is activated, the unit of the characteristics for X-axis and Y-axis is displayed as part of the axis labels.

### **Show additional characteristics in numeric display**

Additional characteristics can be selected to be displayed in numeric displays in the diagram.

### **Tolerance ranges ( only available for F/D diagram )**

For the F/D ( Force/Displacement ) diagram, up to 6 tolerance ranges can be determined. The result of the tolerance analysis is saved in the result register ( see below ). The tolerance ranges are displayed in the diagram.

### **Mode**

The required mode has to be selected ( X/Y diagram, Scanning diagram or Force/Displacement diagram ).

### **Additional vertical / horizontal dashed lines**

Additional vertical / horizontal dashed lines can be added to the diagram ( empty boxes mean : dashed line = off ).

### **Show Grid**

This option activates / deactivated the grid in the diagram.

### **Printout : Headline**

The headline of the printout can be selected :

- Type of the diagram ( “X/Y diagram” / “Scanning diagram” / “Force/Displacement diagram” )
- Note field of Test Scheme ( text that was entered in the note field of the test scheme )

### **Printout : Lower Headline**

The lower headline of the printout can be selected :

- Characteristic name of characteristic with measuring value
- Article name of Test Scheme

### **Printout : Additional Information**

Additional information to be shown on the printout can be selected :

- Batch / Serial Number
- Date / Time
- Batch / Serial Number + Date / Time

### **Generate SFct052.BMP bitmap with F/D diagram**

Redirects the graphic output to a bitmap file with the file name SFct052.BMP. The picture can be integrated in the next test step as a picture element in the display window.  
( In this case, the options “Show additional characteristics in numeric display” or “Printout : ... “ are ignored. )

### **Index for bitmap file name**

Optional index ( 1 ... 255 ) for the name of the bitmap file.  
Example : index = 1 → file name = SFct051\_1.BMP



### ***Result register for tolerance ranges ( only available for F/D diagram )***

The result of the tolerance analysis of the Force/Displacement diagram is saved in the selected register. The result register can have the following values :

- (0) All measuring values ( Y-axis ) are inside the tolerance ranges. Measuring values with reference values ( X-axis ) outside of the configured tolerance ranges are not used for the analysis.
- (1) At least one measuring value ( Y-axis ) is outside the tolerance ranges. Measuring values with reference values ( X-axis ) outside of the configured tolerance ranges are not used for the analysis.