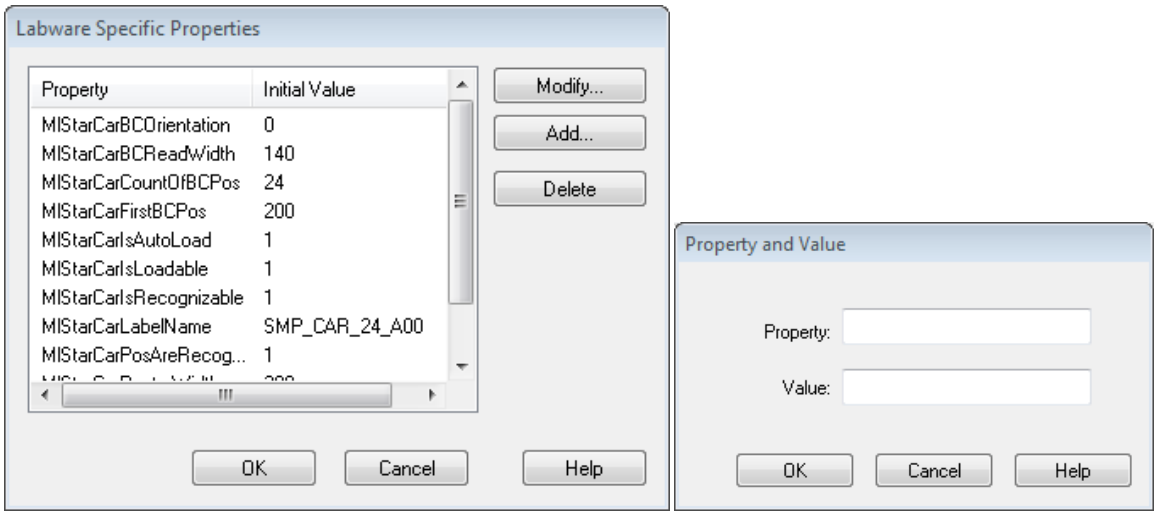
17.4.3 2D Autoload

17.4.3.1 How to Set the Different Properties

In most cases, it is possible to work with the standard labware integrated in VENUS. A new 2D specific property has just to be set when the given labware does not work with those values.

1. Open the labware you want to modify in the labware editor click the labware properties button.
2. Add or modify a property with the specific buttons.



3. Press OK twice and save the labware afterwards.

17.4.3.2 Description of Properties and Usage

See the picture at the end of this chapter for a visual help and read the description to find the function of each property.

Properties used on "Load carrier" only.

Key name	Range [unit]	Default	Description
MlStar2DBarcodeCarFirstBCPosShift	+/- value [1/10mm]	0	This property allows a correction of read position for first barcode as defined with property "MlStarCarFirstBCPos".
Please do not change the value of "MlStarCarFirstBCPos"! Depending on carrier design, the light of the 2D barcode reader may produce a shadow on the barcode. Use this property to shift the position by a few millimeters.			

These properties define where and how a barcode can be read using the 2D barcode reader.

All properties can be used for every kind of labware (carrier, rack and container).

Key name	Range [unit]	Default	Description
MlStar2DReaderRoiYCenterOffset	+/- 1000 [1/10mm]	0	Defines the distance from the barcode trigger position to the barcode center
MlStar2DReaderRoiZCenterOffset	0…2500 [1/10mm]	0	Defines the distance from the bottom of the labware to the barcode center.
Example: • If this property is used on a plate- or tube carrier, the value defines the distance from the instrument deck to the barcode center. • If this property is used on a rack or a container, the value defines the distance from the rack / container bottom (lowest point) to the barcode center The default for this property will be set as half height of container length, if the property "MlStarCarOpenRasterBarcodePositions" is defined.			
MlStar2DReaderRoiYWidth	0…960 [1/10mm]	0	Width of ROI window.
If property "MlStarCarOpenrasterBarcodePositions" is defined, the default for this property will be set to the width of labware.			
MlStar2DReaderRoiZHeight	0…1280 [1/10mm]	0	Height of ROI window.
If property "MlStarCarOpenrasterBarcodePositions" is defined, the default for this property will be set to height of container length.			
MlStarCarBCOrientation	0…2	0 or 2	Defines the orientation of the applied 1D barcode on a rack respectively on a container.
This property will be used if a carrier is loaded with irregular barcode read mode "MlStarCarOpenRasterBarcodePositions". 0 = Vertical, 1 = Horizontal, 2 = Open mode, both directions possible If this property is not defined, the following defaults will be used: Rack = 2, Container = 0 If this property is defined on a carrier, see "MlStarCarBCOrientation"			
MlStar2DReaderIlluminationSettings	"0;0;0;0;0;0;0"	First 5: 0…2 Sixth: 0…15 Seventh: 50…500 [us]	Defines the 2D barcode reader illumination setting. Define 7 values separated by a semicolon. If this property is not defined, the default will be used

Key name	Range [unit]	Default	Description
First value:	Reader light upper rear	0 1 2	Firmware standard ON OFF
Second value:	Reader light lower rear	0 1 2	Firmware standard ON OFF
Third value:	Reader light upper front	0 1 2	Firmware standard ON OFF
Fourth value:	Reader light lower front	0 1 2	Firmware standard ON OFF
Fifth value:	Reader external light	0 1 2	Firmware standard ON OFF
Sixth value:	Contrast gain	0 1…15	Firmware standard Low… high [image noise!]
Seventh value:	Camera exposure time	0 50… 500	Firmware standard Exposure time [us]
Firmware standard:		"0;0;0;0;1;0;0"	
Exception on horizontal reading:		"1;1;0;0;1;0;0"