



Bungard Camera und Monitor  
Add-On for  
SMT3000

Instruction Manual



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# 1 Introduction

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## 2 General

Before installation, connection to the mains or starting this equipment please read all of these instructions.

These instructions should always be available to operators, as they are necessary for the safe operation of this equipment and because they can assist in diagnosing any problems that might occur.

This manual contains informations of the stencil printer and is the translated English version.

- For use by the user and associated personnel.
- Copying and distribution is permitted only for internal company use.

### 2.1 Intended use

The camera system is constructed for the following intended use:

- the recording of assembling and dispensing tasks at SMT-systems.

Only in the manual described utilization is allowed.

The Bungard GmbH & Co. KG assumes no liability for damages made by not correct use of the machine.

## 2.2 Standard text symbols

This manual uses different symbols to characterize important information:



### **Attention**

This symbol shows the user, that the FEEDER could be damaged if the user doesn't follow the exact procedure.



### **Warning**

Marks, if the user could be hurt or the machine could severely damaged when the user doesn't follow the exact procedure.



### **Important**

The marked information should be read carefully to ensure a correct function of the machine.



### **Tips and Tricks**

This symbol marks useful information and helpful hints for the user.

## 2.3 Customer service

There is a return to factory service available for BUNGARD SMD Pick & Place equipment. In the unlikely event of your machine needing to be repaired please send it to your supplier, area representative or direct to us.

To accept a repair item, we use a RMA form. Please request this form before returning the goods to us. Without RMA we can not ensure that the repairs are carried out correctly. For a quick and inexpensive repair a meaningful error description is essential. Please refer to this RMA form.

## 2.4 Warranty and Liability

Please regard the "Sales terms and delivery conditions". These are available after fulfillment of the contract. We don't furnish a guarantee or warranty in cause of damages at material or hurts of people because of

- Incorrect use of the machine
- Wrong setup, installing and operating of the machine or incapable service
- Use of the machine with defective safety equipment
- Nonobservance of the service manual in regard to transport, stocking, setup, installation and service of the machine
- Unlicensed modifications at the machine
- Incorrect or incomplete repairs
- Destructive force effect at the machine in cause of foreign objects or external use of force
- Use of non-original spare parts

## **3 Safety**

Bungard machines may only be operated, repaired and maintained by skilled personnel.

### **3.1 Responsible behavior**

**Consider please the following guidelines for responsible behavior:**

- While maintenance, follow the instructions in the attachment.
- Keep away from moving parts.
- Before operating or try to repair the machine, all manuals and signs has to be read and understood.
- Make sure, that the relevant qualifications and the functions and safety components of the machine are present. If it is necessary, ask a superior.
- Do not misuse the machine. Apply the machine only after its sense of use according to the manual.
- Repairing the devices is only permitted to service technicians of the Bungard GmbH & Co. KG.
- Consider if necessary also the special safety regulations of your country.

### **3.2 User training**

- Only trained and competent persons are allowed to actuate the machine.
- The persons in authority for rebuild, installation, operation, service and repair have to be exactly identified.



### 3.3 Safety and maintenance



#### Warning

To maintain the required operational safety please note the following:

- Keep parts of the body away from moving parts.
- Non conformance with these instructions can lead to death, severe injuries or considerable damage!
- Do not open the housing.
- Do not use the equipment for purposes other than those it was intended for as outlined in the operating instructions.
- The repair of this equipment may only be carried out by persons authorized by the manufacturers Bungard GmbH & Co. KG.
- Please also observe any relevant country specific safety rules.

### 3.4 Operating and maintenance

The stencil printer does not contain any parts requiring routine maintenance.

To ensure trouble free operation over a number of years please observe the following points:

- Please keep the work space clean. Contamination of the stencil printer could lead to premature wear. Examples: corrosion of metal parts or erosion of moving parts.
- Please check regularly the moving parts of free movement. If there is a rough-running you can use a lubricant.



#### Please note !

Should you have any problems with your stencil printer or need some advice on its use we shall be happy to be of assistance to you.

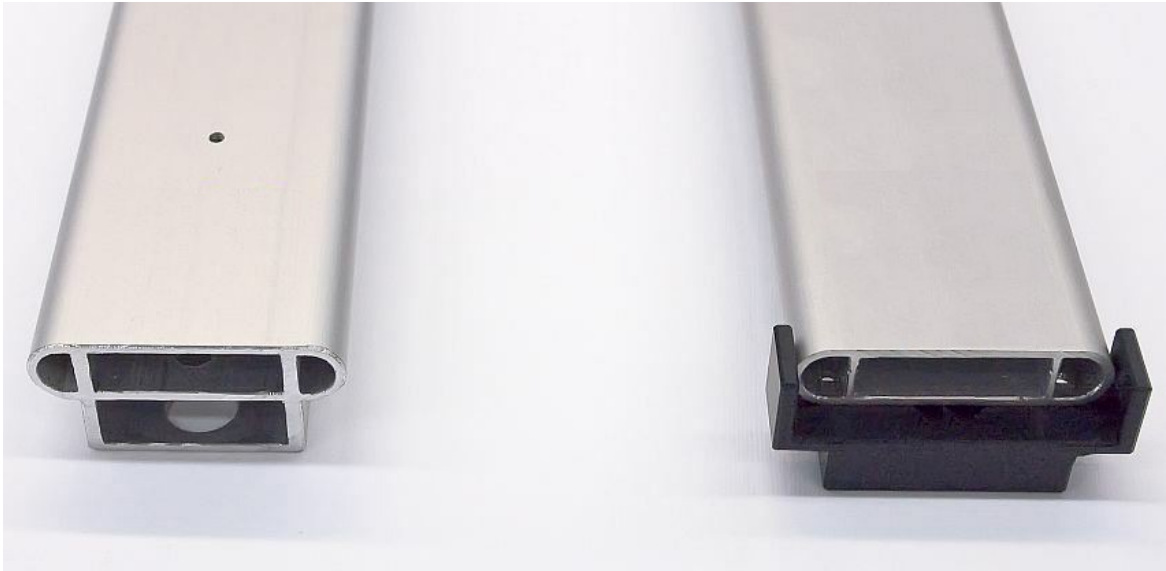
The SD903.005 does not contain any parts requiring routine maintenance.

## 4 Preparations

To mount your Camera Attachment to the basic machine, maybe some preliminary works are necessary.

### 4.1 Profile adapter

If your BUNGARD - machine was assembled with the old profile-type, please mount the included adapter (see picture below, at the right ).

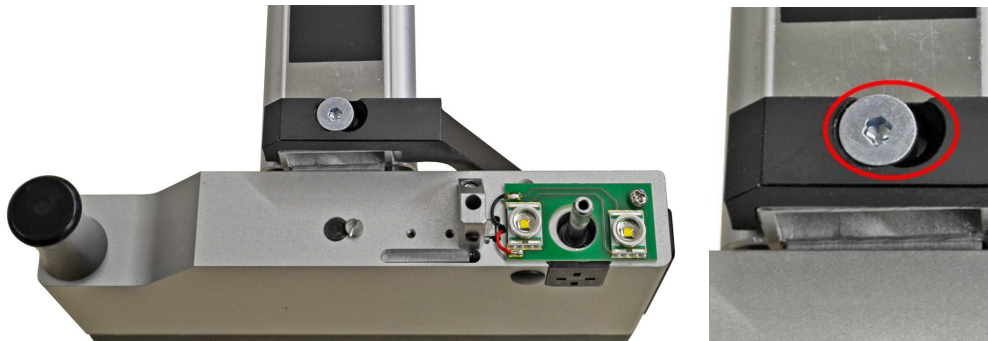


## 5 Mechanical installation

In the following steps it's shown how the installation of the mechanical parts has to be done.

### 5.1 Screw positions SMT-series

In SMT-machines the following position of the fixing bolt is necessary. The bolt is placed at the left side of the slotted hole.



### 5.2 Wiring SMT-series (from 2012)

The camera cables of SMT-machines can be mounted underside the guide arm. Clamp the wires with the provided plates and fix it with the cable strap to the spiral coiled tube. Make sure, that the cable is long enough to cover the complete working-area.



### 5.3 Flexible mounting bracket without camera

The flexible mounting brackets 927.000 are mechanic-kits for cameras. It is delivered without camera, monitor and video-card.

With brackets the cameras  $\varnothing$  18 mm can be adjusted.

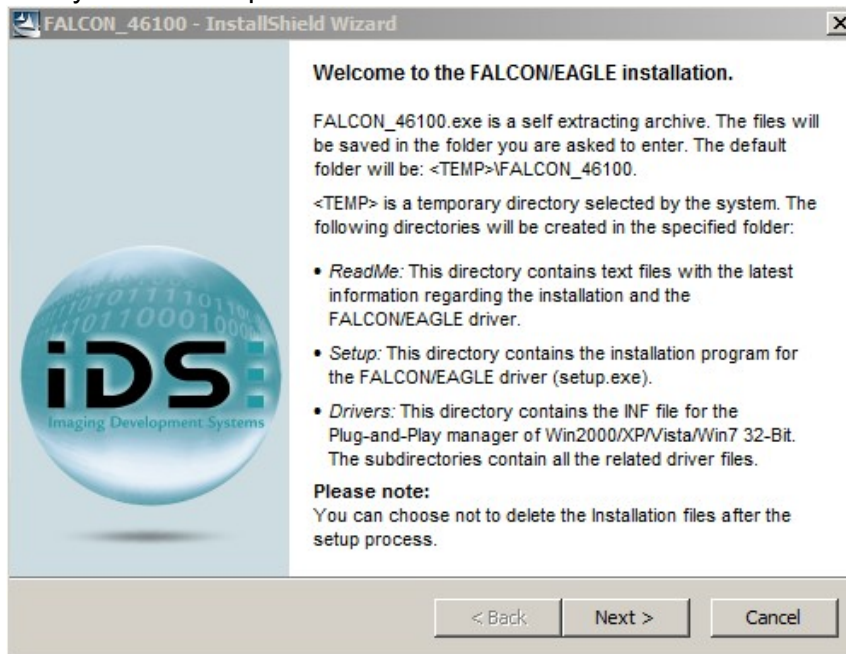
## 6 Software installation

This step is only necessary for camera attachments, which runs with a PC (not required for 927.011 with direct connected monitor).

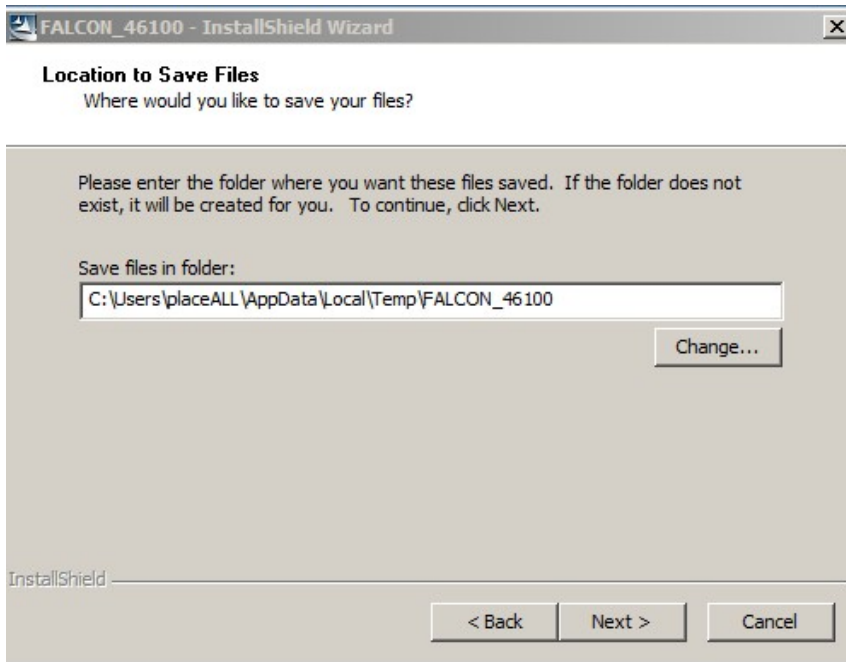
To display the videosignal correctly, the drivers and software has to be installed. Because of the continual improvement of the system please download the latest version from the manufacturer web page.

At [www.ids-imaging.com](http://www.ids-imaging.com) in the category support- drivers and software you will find different systems. Look for your system and download the files (the videocard is from the FALCON-series).

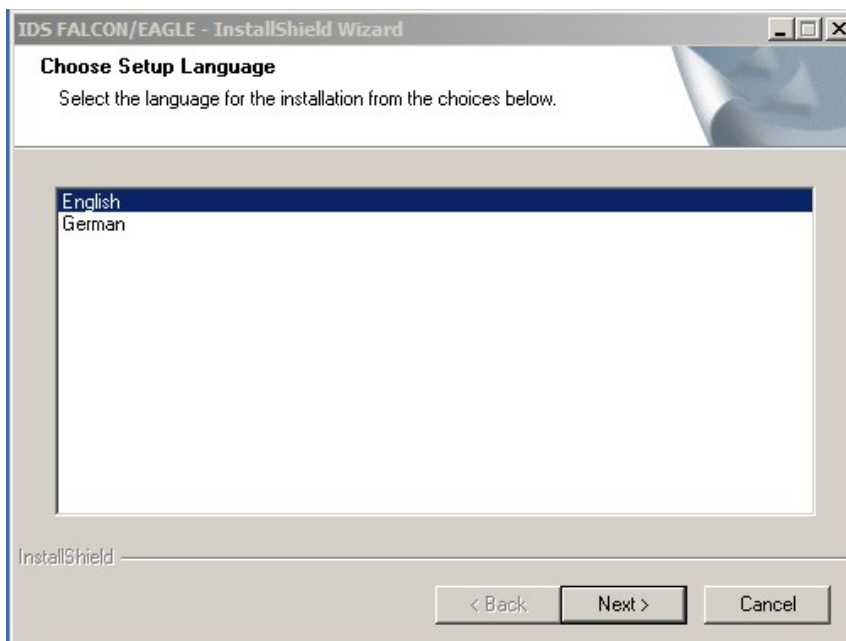
Finally run the setup-file.



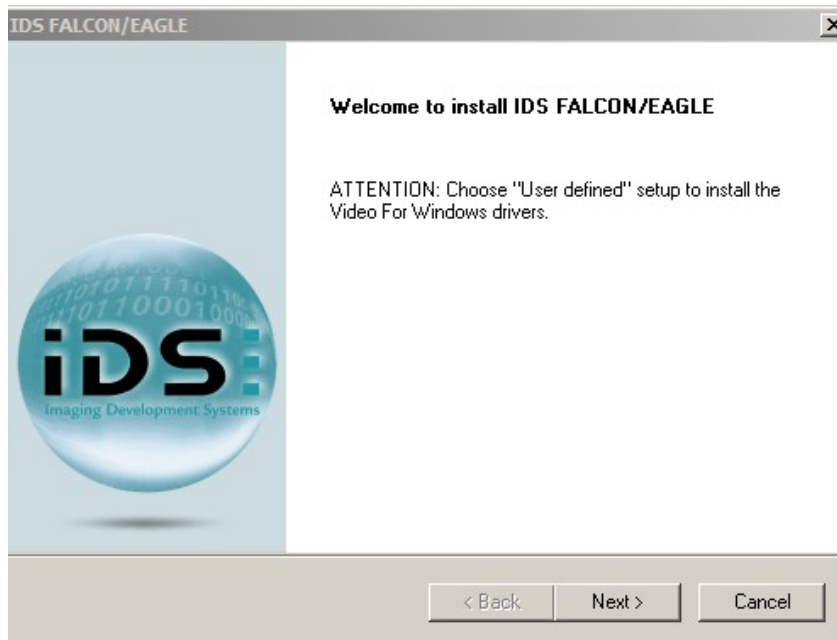
Please confirm with next „Next“



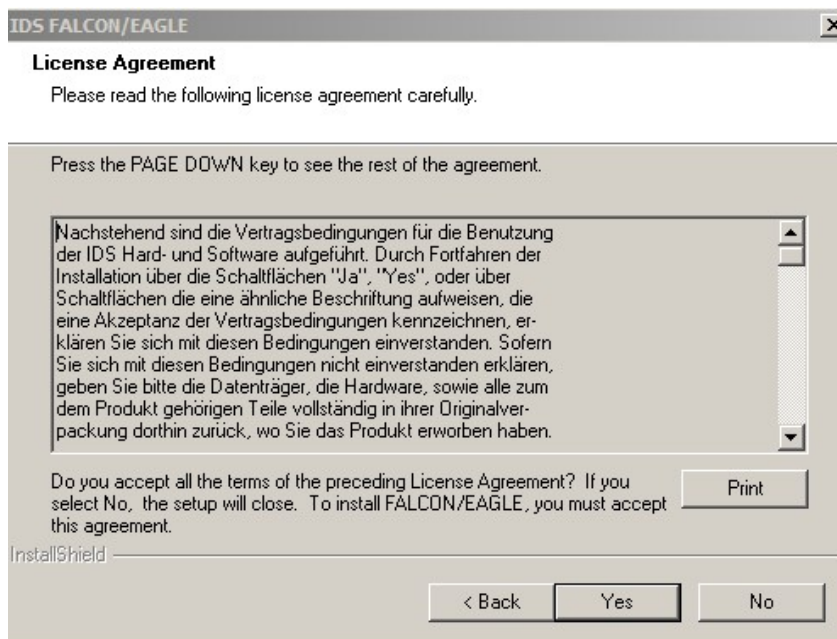
Choose a folder on your system where the files should be saved. Click „**Next**“



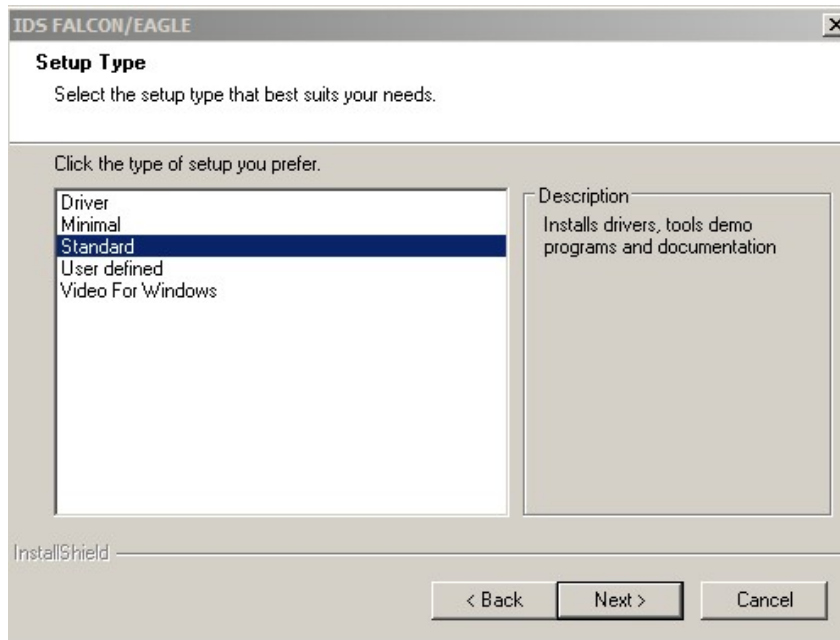
Choose your language and continue with "**Next**".



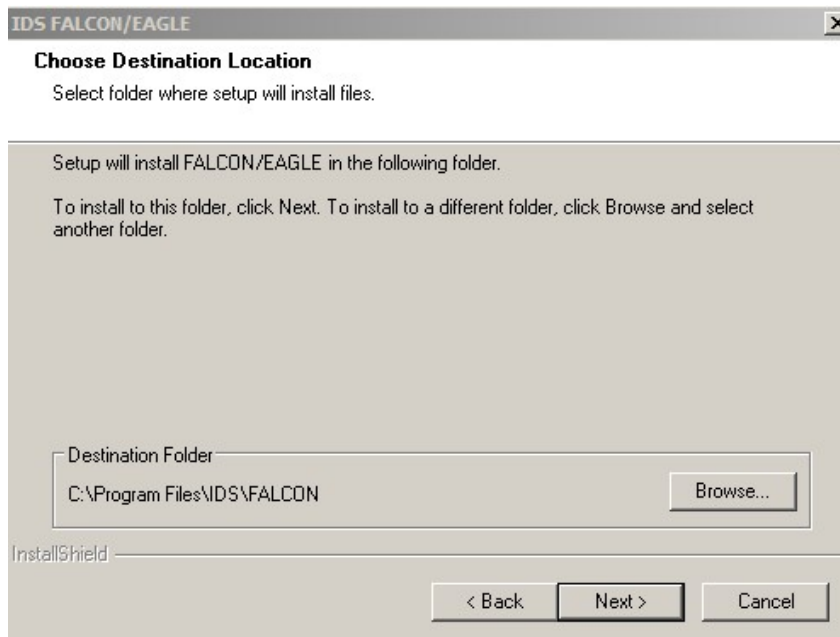
Confirm the welcome-table.



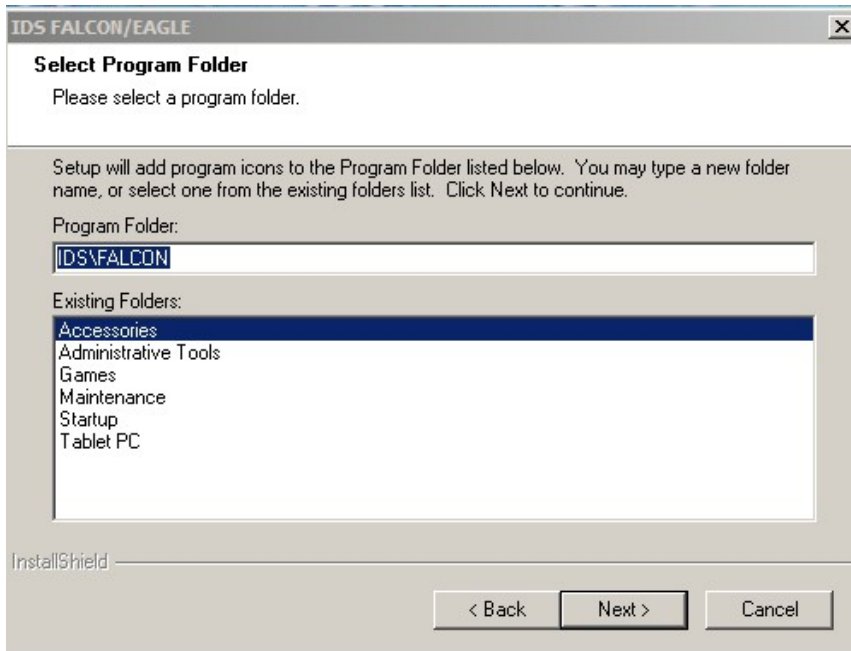
After reading the licensing agreement confirm with **yes**.



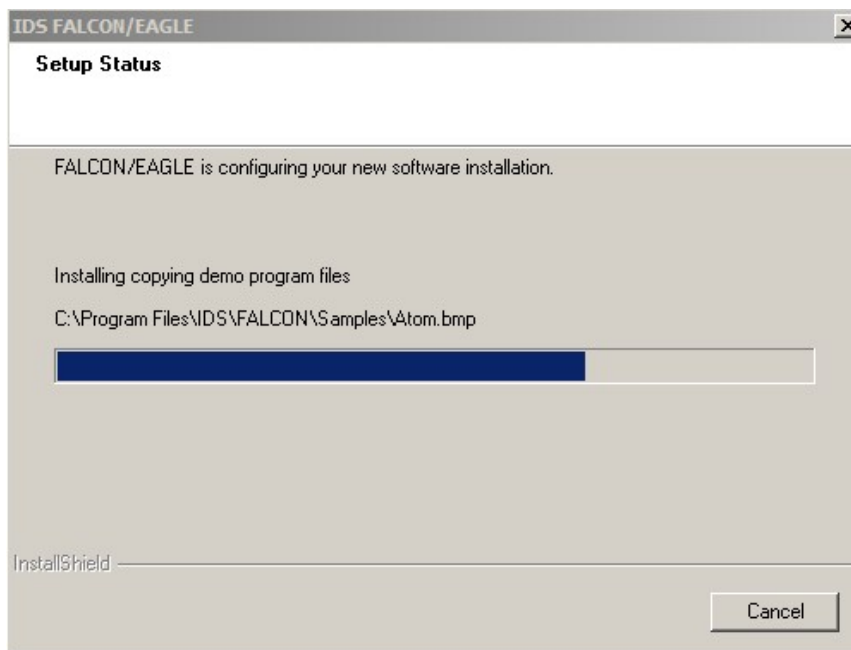
Here you have to choose the standard-installation and after clicking "**next**" the installation continues.



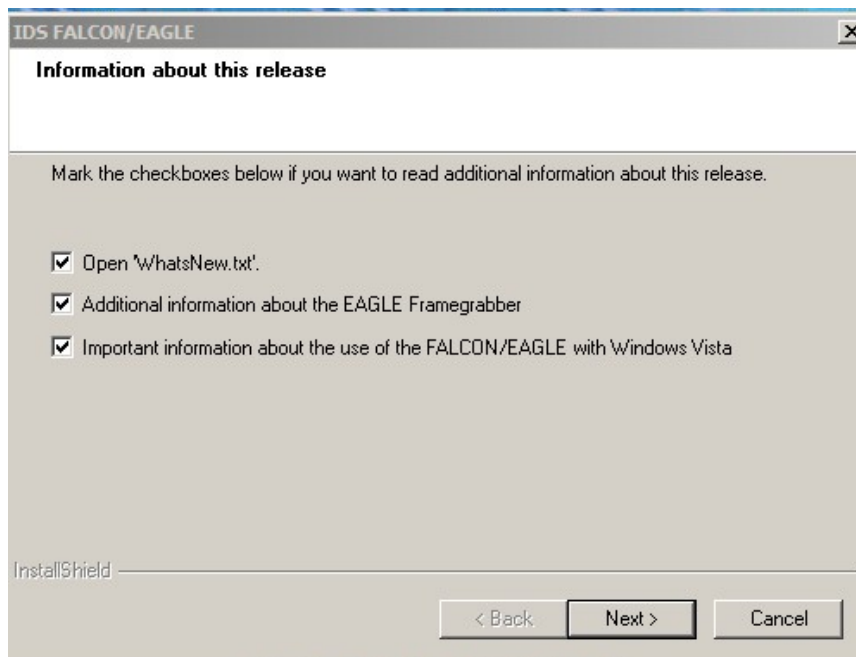
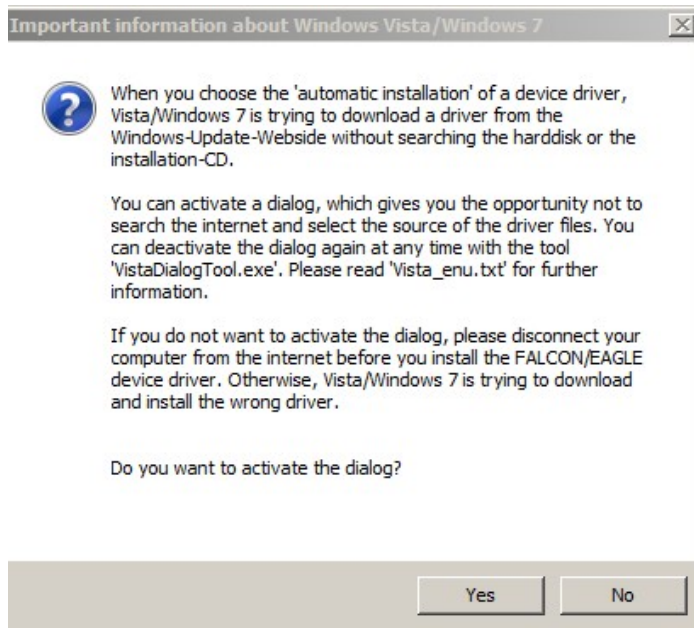
Confirm the Installation Path.



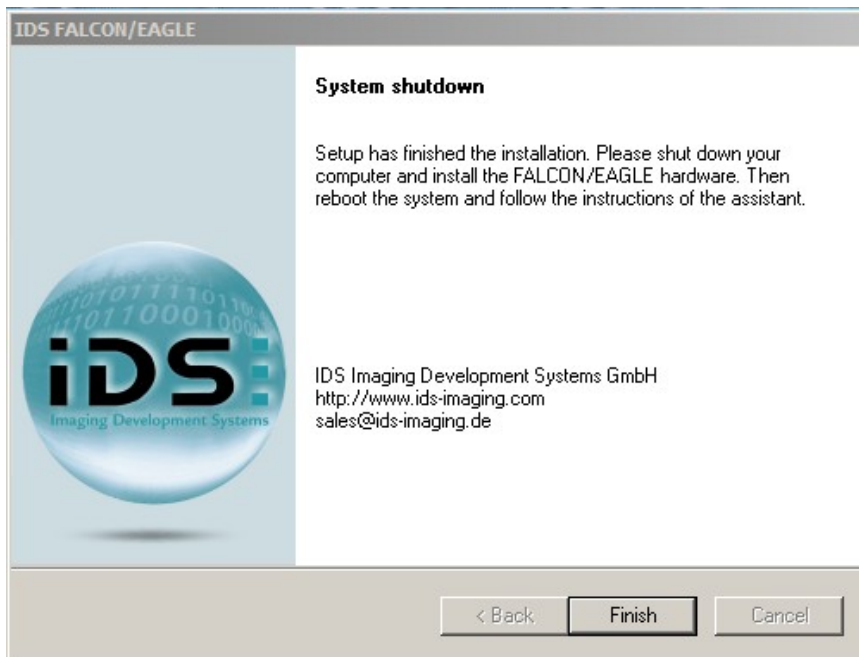
To continue please click "**next**"







Remove the check marks and continue



## 7 Videocard installation

This step is only necessary for camera attachments, which runs with a PC mounted videocard (927.008).



### 7.1 Assembly the videocard

This section describes how to install the FALCON frame grabber in your PC. First of all, switch off your computer before installing a FALCON. In order to prevent any destruction of electronic components on your board, please touch the PC housing. Doing this, existing static charge will be discharged.

The installation of the FALCON is very easy. Please proceed as following:

- Turn off the computer and remove the power cord. In computers with ATX motherboards the PCI bus still remains under charge. Installing or removing the board in this state can result in the destruction of the motherboard and/or the FALCON. Wait a few minutes before installing the frame grabber.
- Open the computer by removing the fixing screws.
- Remove the blank metal plate from a PCI slot which is not in use.
- Plug the FALCON in to a free PCI slot. Pay attention that the card is plugged in to the front part of the slot. Additionally, ensure yourself that your FALCON doesn't touch other electronic components of the PC.
- Fix the card's slot cover into place with a screw.
- Make sure that the card is correctly installed in its slot.
- Replace the computer's cover.

## 8 Installation Camera Attachment for Videomonitors

Camera Attachments with direct-view monitor (927.001 & 927.009) don't need software- or driver installations.

To install the videomonitor plug the chinch-cable to the attached BNC-adapter. Connect it to the "AV1 Input" to finish the installation. A software or driver installation is not needed.



## 9 Handling

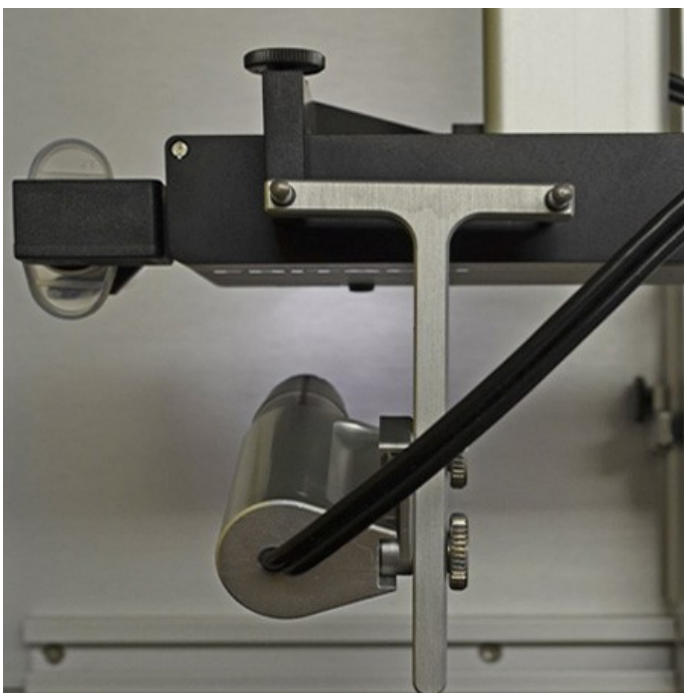
This chapter shows the basics for the machine handling.

### 9.1 Positions of the swiveling holder

After mounting the swiveling holder you can choose between two configurations. For the placement position loosen the knurled screw and turn the short axle to the middle of the assembly head (shown in picture "Placement position"). To get the Dispense position loosen the knurled screw and shift the axle to the dispenser.



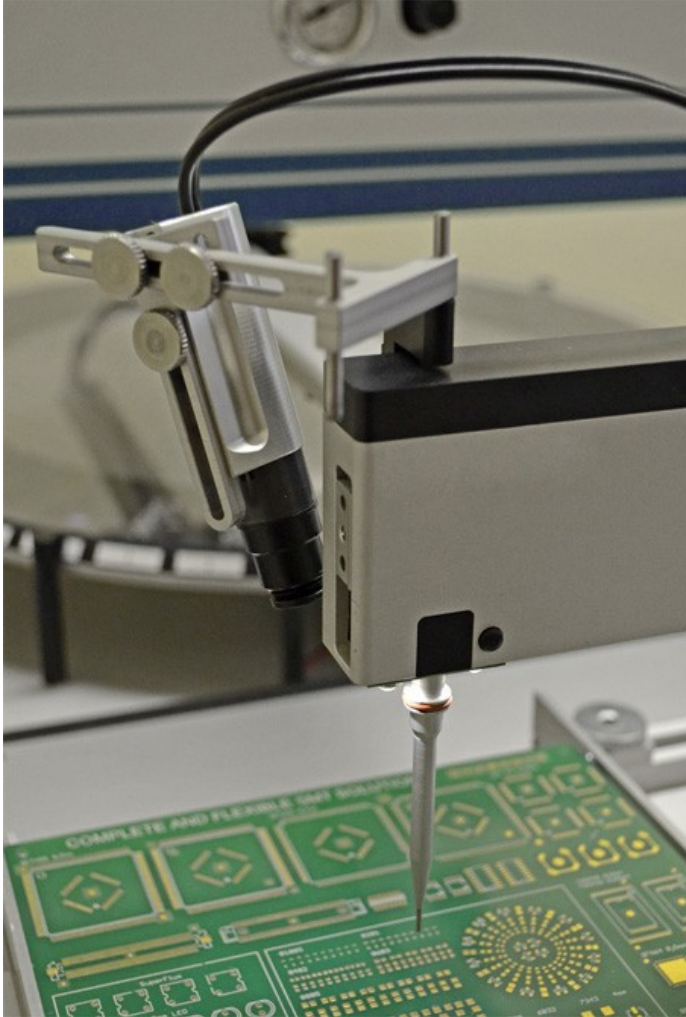
Dispense position



pick & place position

## 9.2 Rotation around component

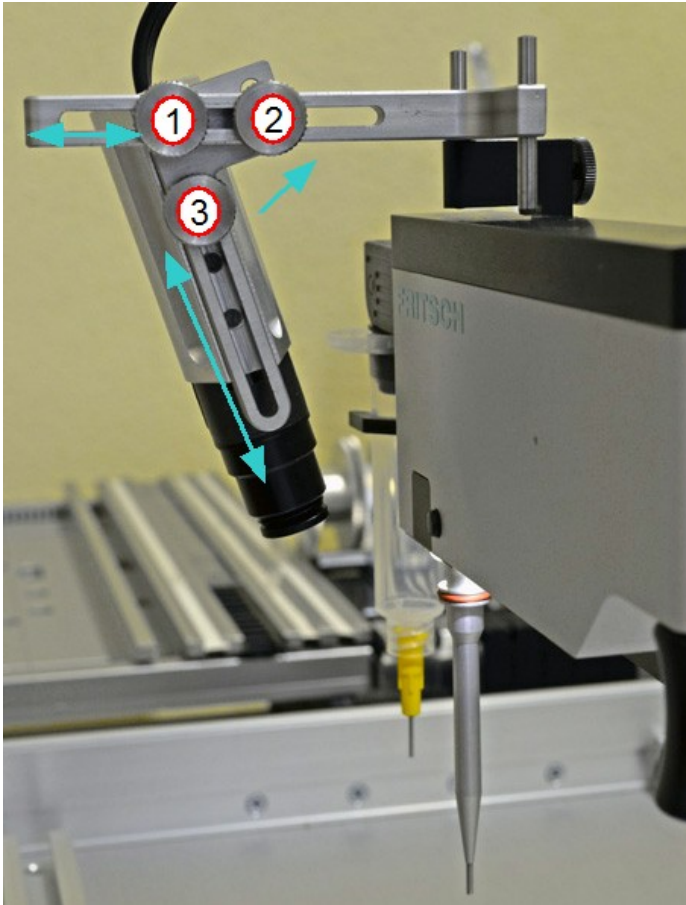
If the swiveling holder is in the placement position and the dispenser is demounted the camera can be rotated around the components. Therefore loosen the black knurled screw at the backside of the assembly head. Select the view you prefer and tighten the knurled screw.



## 9.3 Changing size & center

To reach a maximum of flexibility you are also able to change the center of the camera axis and the picture size.

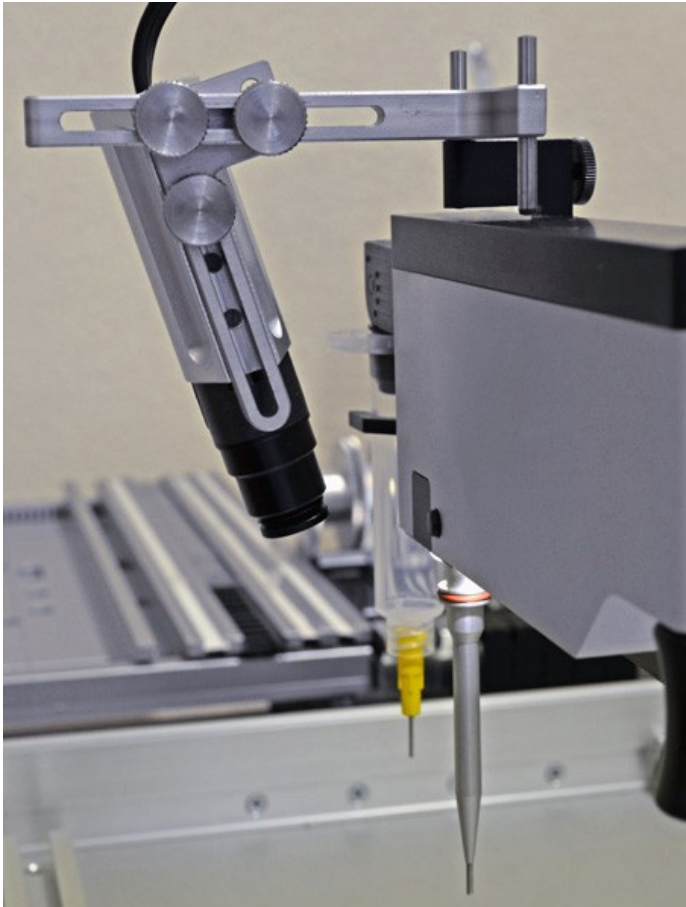
After loosening the screws (1) and (2) the position of the camera and the angle of inclination can be changed. The height is fixed with the screw (3).





## 9.4 Focus changing

-To get a good image sharpness, you can adjust the focus by turning the lens.

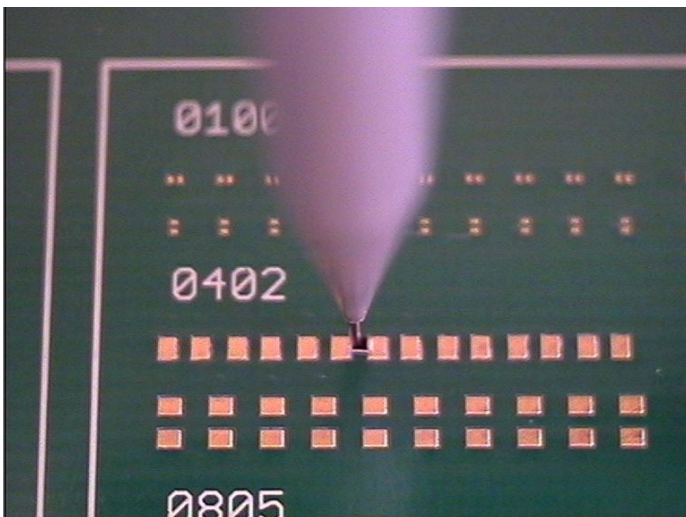
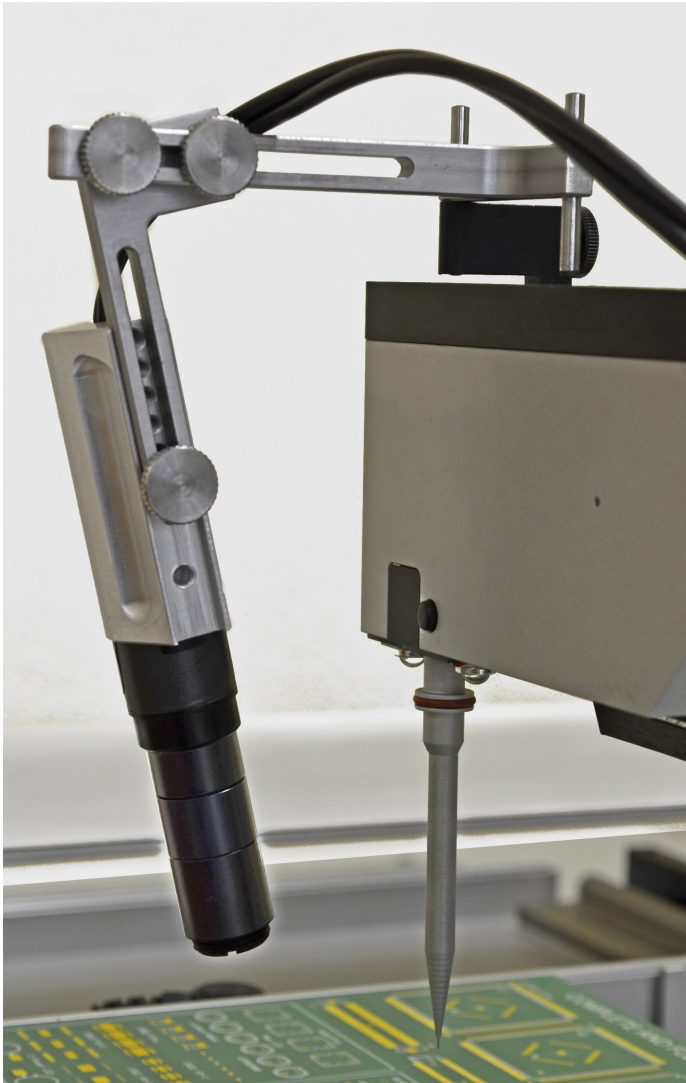




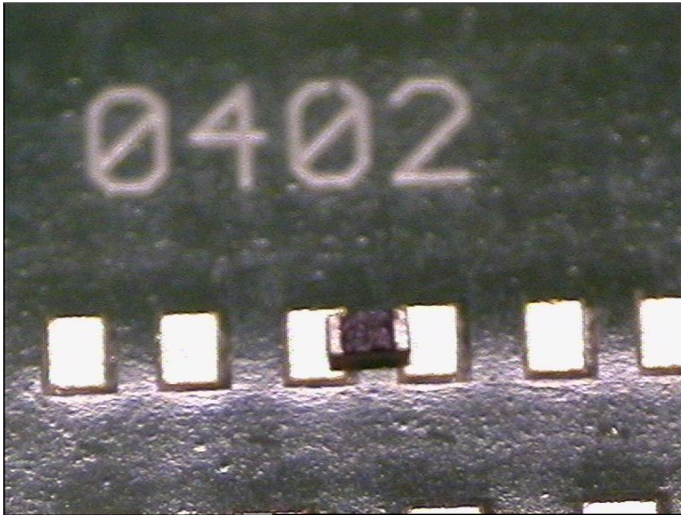
## 9.5 Lenses

The camera is delivered by standard with lens 12x (Image left)  
It can be fitted optionally by a lens 25x (VS.0008.00).





enlargement 12x



**enlargement 25x**

To install the lens 25x you just have to remove the lens 12x and use the distance ring.



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