EASY
EXCELLENCE

3D-SCANNERS
MILLING
PROSTHETIC PARTS
ORTHODONTICS

USER MANUAL

CS.ULTRA

CADstar
Digital Dental Solutions

Table of Contents

1 FOREWORD

This optical 3D Scanner (hereinafter Scanner) is a product that applies to all safety technical requirements and was developed to the state of the art. Nevertheless, the scanner might endanger persons, if they are not trained or use the scanner in an incorrect way. In *chapter 7 „Safety“* and by safety notes in the entire operating instructions we point out possible dangers.
This documentation serves for safe operation on and with the scanner. It contains safety notes which must be observed by any means.
All persons who work on and with the scanner must have the documentation available and observe the information and notes relevant for them.
The documentation must always be in a complete and perfectly readable state.
CADstar GmbH assumes no liability for technical inaccuracies, typographic errors or faults in this documentation, furthermore, no liability for damages, which can be traced back to delivery, performance or use of this documentation, is granted.

1.1 MARKING

The scanner is clearly marked by the content of its type plate.
CE marking according to:

- Machinery Directive 2006/42/EG
- Electromagnetic Compatibility (EMC) Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2011/65/EU

1.2 CUSTOMER SERVICE

In case of technical problems, contact our customer service or the respective responsible distributor for the respective country:

Sparkassenstraße 4
5500 Bischofshofen
Tel.: +43 (0) 64 62 / 328 80
Fax: +43 (0) 64 62 / 60 11-11
support@cadstar.dental
www.cadstar.dental

1.3 LIABILITY

The details in this documentation describe the features of the product without assuring them.

No liability will be accepted for damage which arises due to:

- Unintended use of the scanner.
- Disregard of the documentation.
- Unauthorized changes on the scanner.
- Improper work at and with the scanner.
- Operation of the scanner with defective safety equipment or improperly attached or non-functioning safety equipment.
- Insufficient monitoring of scanner parts, which are subject to wear.
- Improperly executed repairs.
- Unauthorized and improper modification of operational parameters.
- Catastrophes, influence of foreign bodies, and force majeure.

2 TRANSPORT AND INSTALLATION SITE

It must be ensured that the device is only transported in packaging which is intended for it. Transport in insufficient or defective packaging may result in damage of the product. Furthermore, the product must not be exposed to heat or humidity during transport.
If the device is stored for a longer period of time, it should be stored in its original packaging and on a dry place. This should avoid corrosion and contamination.

2.1 INSTALLATION

2.1.1 Unpacking

Remove the packaging of the scanner carefully and check if all parts which are included in the scope of delivery have been delivered.

NOTICE

Environmentally friendly disposal of packaging

- *Dispose the packaging in an environmentally friendly way (paper into paper waste, plastic into plastic waste, etc.).*
- *Keep the packaging for possible return.*

Scope of Delivery

- 1x 3D- Scanner „CS.ULTRA“
- 1x 3D- Calibration Body
- 1x Object Holder
- 1x Multi Die- Plate
- 1x Power Supply
- 3x USB- Cable
- 1x HDMI- Cable
- 1x Exocad Dongle „rockeyBlue“

2.1.2 Installation Site

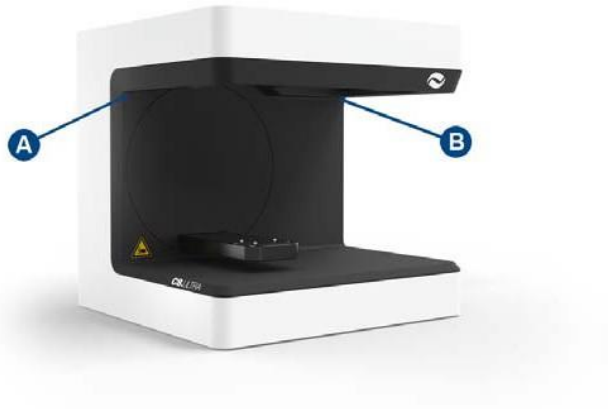
- It must be ensured that the installation site is even and free from vibration and contamination.
- It must be ensured that the installation site is free from excessive exposure from dust or toxic and caustic gases and vapors and that no inadmissible heat arises.
- It must be ensured that the installation site is free from electromagnetic radiation.
- It must be ensured that the installation site is equipped with the necessary power and network connections.
- The power and bus lines must have a sufficient length.
- Choose an installation site which cannot be reached by children. The installation site must ensure a safe positioning of all connected cables.
- Power supply cables as well as incoming cables must not be damaged or crushed by other objects.
- Choose an installation site where liquids or objects (condensed water, etc.) cannot enter the device.

⚠DANGER ***Danger due to heat***

- *Never expose the scanner to direct sun and avoid direct proximity of heat sources (e.g. radiators, other electronic devices, fireplaces, etc.).*
- *Ensure a generously measured air circulation around the device. Thus, damage to the device as well as burning danger due to overheating can be avoided.*
- *Furthermore, direct sun or strong extraneous light might lead to undesirable reflections on the monitor and sensors of the scanner.*

2.2 LIFTING POINTS

The device is equipped with two lifting points (A) and (B). Touch the scanner at these points with the left and right hand. The device weighs 19 kg and can be carried by one person, the open side of the scanner should point away from the body.

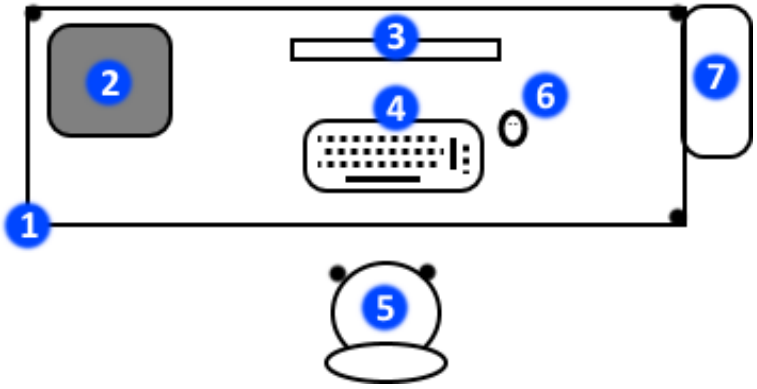


2.3 EXAMPLE FOR INSTALLATION

NOTICE

Schematic representation of the scanner

- *The following pictures are schematic representations of the scanner which serve as a visualization of the overall system.*



(1)	Desk	**(5)**	Desk Chair
(2)	Optical 3D Scanner	**(6)**	Mouse
(3)	Computer Screen	**(7)**	Computer
(4)	Keyboard		

⚠ CAUTION

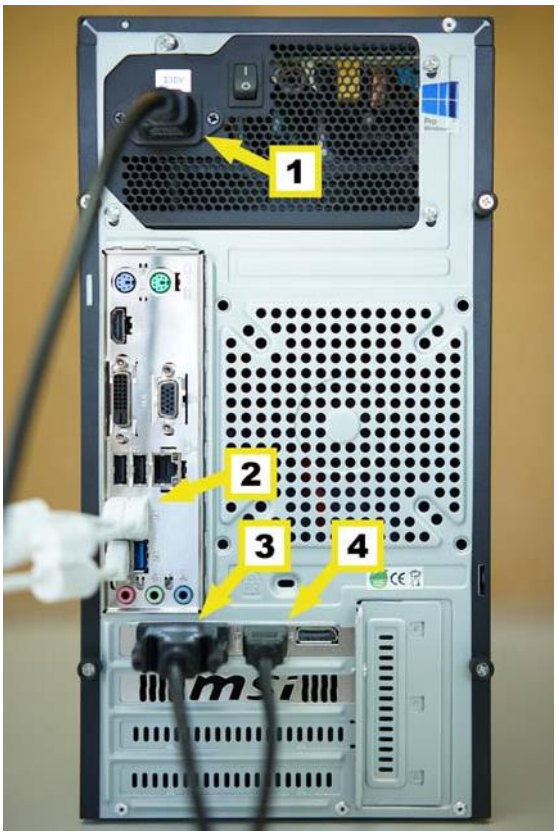
Danger due to loose cables

- *Ensure that cables are installed alongside walls.*

3 INSTALLATION

3.1 CONNECTOR STRIPS

Back of PC:



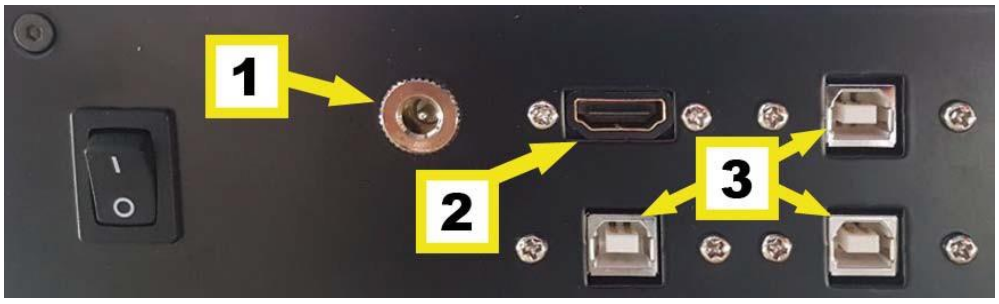
1 = Power supply PC

2 = Scanner to PC connection (USB cable)

3 = Monitor connection (DVI cable)

4 = Scanner connection (HDMI cable)

Back of Scanner:



1 = Power Connector
2 = PC connection HDMI
3 = PC connection USB

! - Make sure that all cables are firmly attached and screw connections tightened.

3.2 INSTALLATION OF THE SCANNERS

For installation proceed as follows:

NOTICE

Procedure for installation of the scanner

- *Make sure that the power switch is in "0" position. (The position of the power switch may vary according to the device model).*
- Connect the „input power cable" and the power supply via the supplied power cable.
- Connect the scanner with the computer via the supplied USB-cables with the intended USB-ports. (2)
- Connect the scanner and the computer with the supplied HDMI-cable with the intended HDMI-port. (4)

⚠ CAUTION

Danger due to electromagnetic radiation

It must be ensured that the installation site is free from increased electromagnetic radiation.

3.3 INSTALLATION OF THE PC

NOTICE

Consideration of the minimum system requirements

- *Consider the recommended minimum system requirements of the PC work-station in order to ensure a trouble-free function of the scanner.*
- Install the computer according to the installation advice of the computer manu-facturer.

3.4 INSTALLATION OF THE SOFTWARE

NOTICE

Installation of the software

- *The* CS.ULTRA *scan-software is already preinstalled on supplied workstations.*
- *If this is not the case, it can be installed via remote control by our customer service. Please, contact our customer service, see chapter* ***1.2****.*

4 GENERAL DESCRIPTION

Optical 3D scanners are used for dental applications for three-dimensional measurement and digitalization of human jaw models. Based on the principle of „light stripe scanning“ a projector projects a light strip pattern to an optical mirror, which beams the test pattern onto the object, which should be measured. The distortion of the light pattern which is caused by the depth of the jaw model is registered by two high-resolution cameras, which are fixed to a tripod together with the mirror, processed and thus digitalized to a virtual, three-dimensional model.

4.1 LAYOUT

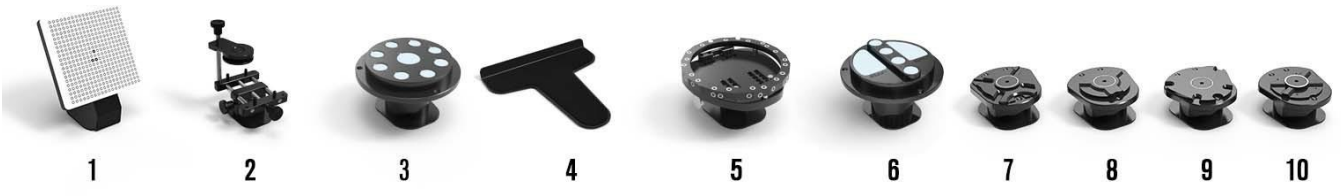
Main Parts

(1)	Main Switch and Connectors	**(4)**	Connection Base
(2)	Scan Unit	**(5)**	Housing
(3)	Swivel Bracket		

4.2 ACCESSORIES

⚠WARNING ***Danger due to non-use of genuine spare parts***

- *Only use genuine spare parts!*
- *Otherwise warranty and liability may be affected!*



(1)	Calibration Plate	**(6)**	Quarter Tray Adapter*
(2)	Model Holder (+ Fixator*)	**(7)**	Split Cast Type A*
(3)	Multi Die Adapter	**(8)**	Split Cast Type B*
(4)	Arti Base*	**(9)**	Split Cast Type C*
(5)	Quick-Fix Model Holder*	**(10)**	Split Cast Type D*

* Optional

4.3 USING THE CS.ULTRA 3D-SCANNER

4.3.1 Calibration

The calibration is initiated by opening the "ULTRA Scan" software and then **creating a new project**.
The calibration plate must be placed into the scanner and the procedure started by choosing:
"**Tools**" > **"Service Mode"** > "**Recalibrate Head**"
After successful optical calibration, the mechanical axis of the scanner needs to be calibrated.
An unsawn stone model must be fixed in the model holder and then placed into the Scanner.

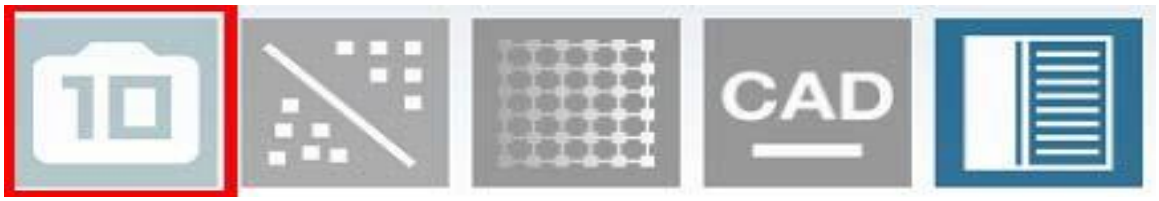
After successful axis calibration the scanner is ready to operate.
When calibration fails please contact our customer service, see chapter ***Fehler! Verweisquelle konnte nicht gefunden werden.****1.2*

4.3.2 Workprocess

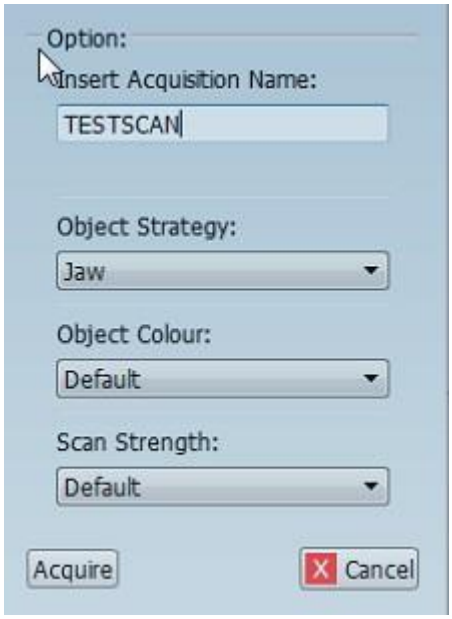
The basic scanning procedure consists of three elements:

- **A)** Capturing of a 3D object as a scatter diagram
- **B)** Generating a solid mesh-model of the acquired data
- **C)** Exporting the mesh in stereolithography format for further editing

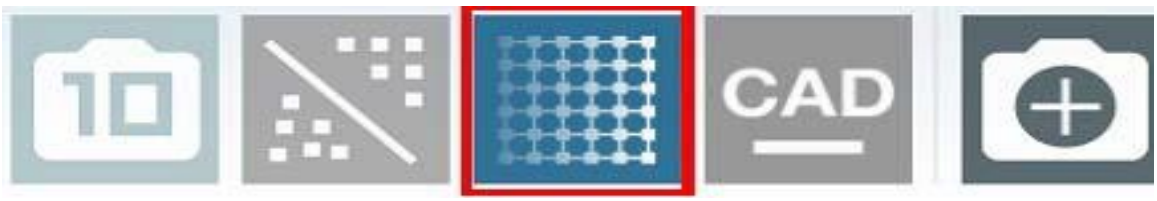
A)



After starting the acquisition a menu shows up with a selection of different scanstrategies. Choose the appropriated settings from the dropdown menus and press acquire.

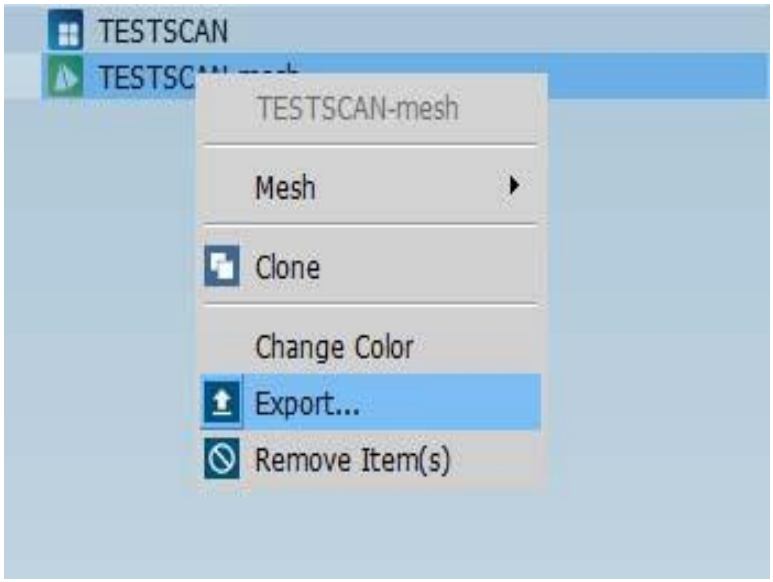


B)



In the next step a stereolithography-mesh will be generated from the acquired data.

C)



When rightclicking the mesh and selecting “Export”, the file can be saved in different formats.

5 MAINTENANCE TASKS

5.1 RE-CALIBRATION

In order to guarantee a constant scanning result, it is recommended to calibrate the scanner once a week with the supplied calibration plate. *Described in chapter 4.3.1*
It is also recommended to calibrate the scanner after transport or relocation.

5.2 CLEANING

⚠ CAUTION ***Danger due to entering foreign matters into the scanner***

- *During cleaning no water, steam or detergents may enter the electrical scanner parts.*

⚠ DANGER ***Danger due to unintended start***

- *The optical 3D scanner must be switched off and protected against restart before cleaning tasks.*
- *Hereto, switch off the toggle switch on the back of the scanner in order to avoid a possible danger due to unintended startup.*

⚠ CAUTION ***Damage of the scanner due to incorrect cleaning***

- *In order to avoid damage on the optical sensors which are in the upper part of the scanner, it must not be cleaned by the operator, since those parts are sensitive and might be damaged due to incorrect cleaning.*
- *Additionally, it is recommended not to use any strong cleaning agents since they could also damage the scanner.*

Cleaning tasks on the scanner may only be performed by instructed persons who are informed about the danger that may emanate from the scanner.
During cleaning tasks the scanner must be stopped and the electrical supply must be switched off. By switching off the electrical supply the pneumatic supply is switched off as well.
The scanner may be vacuum-cleaned or wipes off with a dry cloth for cleaning purposes.

The following cleaning tasks must be carried out in the intervals mentioned below:

Cleaning Task	**Interval**
Vacuum-clean / dust off control elements	weekly
Sweep floor around the scanner	weekly
Dust off electrical equipment (computer, connector strip, cables, control elements, etc.)	weekly

5.3 REPAIR / TROUBLESHOOTING

The optical 3D scanner contains sensitive electrical components and sensors. Hence, repair may only be carried out by trained expert personnel. In case of errors which cannot be solved by restart of the scanner or the workstation, contact our customer service immediately.

NOTICE ***Errors on the scanner***

- *In case of errors or unintended changes on the scanner contact our customer service immediately.*

⚠ DANGER ***Danger due to stored residual energy***

- *The scanner may still contain remaining energies that might be released unexpectedly during maintenance and therefore cause danger for persons.*

⚠ DANGER ***Danger due to insufficiently trained personnel***

- *Tasks may only be carried out by expert personnel.*
- *Any operation which might affect the safety of the scanner must be avoided.*

⚠ DANGER ***Danger due to unauthorized persons***

- *The operator must ensure that no unauthorized persons perform tasks on the scanner.*

6 INTENDED USE

The „CS.ULTRA“ scanner is intended for three-dimensional optical measurement of human jaw models in combination with the supplied software. Furthermore, the scanner enables a measurement of articulated models by means of the respective CADstar supplies.
Only imprints and plaster models of jaws as well as articulators may be inserted (max. 1500g, max. dimensions W x L x H: 160mm x 160mm x 160mm).
Use accessories specified by CADstar only.
The scanner is intended to be set up in ergonomic height (mind the national employee protection regulations).

Any other use needs written consent by CADstar GmbH. Unintended use may lead to endangering of persons and to damage of the device. The CS.ULTRA no independently functioning device, it must be equipped manually. Thus, it may only be taken into operation after reading and understanding the documentation.
Furthermore, in case of unintended use, liability and warranty are voided. The CS.ULTRA may only be operated under the conditions prescribed in this documentation.

6.1 TARGET GROUP AND PREVIOUS KNOWLEDGE

This documentation is addressed to the operating personnel of this scanner. The operating personnel have to be selected by the operating company and must fulfill following requirements:

- Basic technical knowledge
- Ability to read and understand these operating instructions
- The operators must not have visual impairment since they have to read the labeling on the scanner and the notes in the documentation without any problems.
- The person must be strong enough to lift the device and to carry it to its final location.

To obtain the knowledge that is necessary to operate the scanner, the following measures must be taken by the operating company:

- Product training (written confirmation by the trained persons)
- Regular safety briefings
- Inspection, maintenance, cleaning and installation may only be carried out by technical expert personnel with product specific training and/or electrical education.

6.2 CONTENTS AND PURPOSE OF THIS DOCUMENTATION

This documentation contains the relevant information for start-up, operation, maintenance, repair and disposal of the scanner.
This documentation shall enable persons to work with the scanner without danger.
Observing the notes mentioned here serves to avoid dangers and prevent damage of the scanner.

6.3 OPERATING LIMITS

The operating limits for the scanner rare restricted as follows:

- Operating temperature: 18°- 30°C
- Clean and dry indoor climate
- Horizontal installation site on a stable and vibration-absorbing work
- Relative humidity: 20% - 80% - not suitable for wet rooms

6.4 PRINCIPLE

The scanner is technically at the state of the art and complies with valid safety and health regulations.
Still the following dangers can occur due to operation error or misuse:

- for life or health of the user or others
- for the station or other properties of the operator
- for the efficient use of the scanner

7 SAFETY

This documentation is designed according to the valid EU-directives and contains safety instructions. The operator of the scanner is responsible that the operating personnel receives the necessary safety relevant information and also reads the documentation. The individual persons themselves are responsible to observe the safety notes.

This chapter contains a general introduction to safety notes as well as a description of the warning and safety notes which belong to the safety signs on the scanner. Furthermore, important notes about accident prevention can be found in this chapter.

7.1 SIGNAL WORDS USED IN SAFETY NOTES

⚠DANGER *A safety note with the signal word DANGER points out immediate danger for the life and health of persons!*
Immediate danger for life and health of persons.

⚠WARNING *A safety note with the signal word WARNING points out dangerous situations that may affect the health of persons!*
Danger of injury of persons and possible additional damage of property.

⚠CAUTION *A safety note with the signal word CAUTION points out possible dangerous situations that mainly may have damage of property as consequence!*
Danger of damage of property and possibly additional slight injury of person.

NOTICE *The symbol NOTICE points out supportive information on installation, operation, maintenance and installation.*

7.2 RESIDUAL RISKS/WARNINGS

Although highest diligence was taken during construction and assembly of the scanner and all safety relevant issues were observed, some risks that were evaluated in a risk analysis may remain. In this chapter all residual risks and warnings which result from the risk analysis are listed.

NOTICE ***The operating and maintenance personnel must be informed about operation and dangers on the device regularly.***

- *Reading the operating instructions is mandatory.*

⚠WARNING ***Mechanical and electrical dangers due to incorrect installation***

- *The installation of the scanner as well as repair tasks may only be carried out by authorized personnel.*

⚠DANGER ***Danger for third parties during commissioning***

- *Make sure that no person is inside the danger zone before every start of the device.*
- *If a danger arises, disconnect the scanner from the mains immediately.*

⚠CAUTION ***Danger due to falling objects***

- *The device may only be transported when it is secured and packed correctly.*

⚠DANGER ***Crushing danger when positioning the device***

- *Mind the possible crushing danger when handling the device. Especially when it is set down after transport.*

⚠WARNING ***Danger due to unergonomic height and unstable setup***

- *The scanner is intended for installation in ergonomic height (see valid employee protection regulations of the respective country).*
- *In any case, the fundament of the device must be able to carry at least the double weight of the scanner.*

⚠DANGER ***Tripping danger due to lines installed on the floor***

- *Mind the tripping danger due to lines installed on the floor.*
- *Basically, install lines along walls.*
- *The lines must not be tensioned.*

⚠DANGER ***Danger due to improper operation***

- *Keep children away from the scanner.*
- *Only trained personnel may work with the scanner.*

⚠WARNING ***Danger due to vibration during operation and insufficient load capacity***

- *The installation site must handle possible vibrations during scanning without problems, i.e. the load capacity of the chosen fundament (workbench, table, etc.) must be at least twice as high as the value mentioned in the technical specifications.*
- *Furthermore, the stability which is needed for absorbing the vibrations must be guaranteed.*

⚠ DANGER ***Danger due to movement of the swivel arm***

- *The swivel arm moves during operation.*
- *The danger zone must not be reached into since fingers might be injured.*

⚠ WARNING ***Danger due to unauthorized opening of the scanner***

- *Opening the scanner is generally prohibited and may only be carried out by CADstar service personnel.*

⚠ WARNING ***Unforeseeable dangers***

- *If the device will not be used for a longer period of time, disconnect it from the mains and switch off the operating switch on the back of the scanner.*

⚠ DANGER ***Crushing danger when closing the scanner cover due to attraction force of the magnets***

- *Mind the crushing danger due to the attraction force of the magnets when closing the scanner cover.*

⚠ DANGER ***Crushing danger when handling the scanner inserts***

- *Mind the possible crushing danger when handling the scanner inserts.*

⚠ DANGER ***Danger due to humidity***

- *The scanner is not intended for use in damp rooms.*
- *The scanner must not be touched by liquids.*
- *Do not place vessels containing liquids on the scanner.*
- *Cleaning may only be carried out with a dry cloth.*

7.3 SAFETY NOTES FOR THE OPERATOR

HINWEIS

The operating and maintenance personnel must be informed about operation and dangers on the device regularly.

- *Take care that every person, working at the scanner for the first time, has read and understood these operating instructions.*
- *Especially point out the safety instructions in this documentation and on the scanner.*
- *Keep the documentation near the scanner and pass the documentation on to new personnel.*
- *Take care that nobody without technical knowledge handles the scanner.*

HINWEIS

The operating and maintenance personnel must be informed about operation and dangers on the device regularly.

- *The operating personnel have to be trained regularly in order to operate the scanner safely!*
- *Observe the national employee protection regulations!*

⚠DANGER

Danger due to unauthorized startup during tasks on the scanner

- If service, maintenance or repair tasks are carried out on the scanner, it must be protected against unauthorized startup!

⚠WARNING

Danger due to non-use of genuine spare parts

- *Only use genuine spare parts!*
- *Otherwise warranty and liability may be affected!*

⚠CAUTION

Danger due to unreadable warning notes on the scanner

- *Take care that the warning notes attached to the scanner when it is delivered remain well readable!*
- *Missing or damaged warning notes must be replaced immediately!*

⚠CAUTION

Danger due to additional devices of third party manufacturers or unauthorized modifications on the scanner

- *Later installation of additional devices from third parties or alteration of safety devices are not allowed without coordination with CADstar GmbH or the manufacturer of the respective additional device!*

7.4 SAFETY NOTES FOR THE OPERATING PERSONNEL

NOTICE

The operating personnel must have the necessary qualifications

- *The scanner may only be operated by qualified personnel!*
- *These personnel must be familiar with all safety notes and the respective measures mentioned in these operating instructions and on the scanner*

NOTICE

Protection against restart of the scanner

- *Before starting cleaning, maintenance or repair tasks the scanner must be switched off and protected against restart!*

⚠ DANGER

Danger due to electrical scanner components

- *The electrical equipment of the scanner contains devices which generate hazardous voltages and control rotating mechanical parts.*
- *Keep away from voltage carrying areas!*

⚠ CAUTION

Danger due to electrical scanner components

- *Before starting cleaning, maintenance or repair tasks the scanner must be disconnected from the voltage supplies!*

7.5 PERSONAL PROTECTIVE EQUIPMENT

The scanner is designed such that persons who work with it do not need any additional safety equipment above the usual work place equipment (e.g. safety shoes).

NOTICE

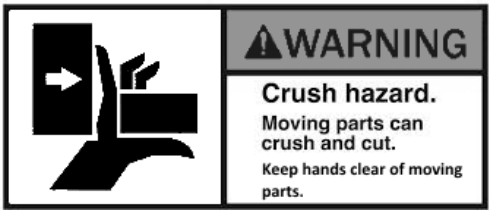
Mandatory measures for cleaning and maintenance tasks

- *Persons who perform cleaning and maintenance tasks must observe the safety measures implied by the cleaning agents (e.g. gloves for cleaning liquids, splash guard etc.)!*

7.6 SAFETY NOTES ON THE SCANNER

Safety notes that point out possible dangers/remaining risks are also attached to the scanner. The instructions on the safety notes on the scanner have to be observed under all circumstances. If these safety notes should fade or get damaged during the life time of the scanner, they have to be replaced by new ones immediately. The readability and completeness must be checked in regular intervals.
As soon as the notes are no longer readable and understandable at first glance, the scanner has to be stopped until new notes have been attached.

Pictograms for warning, prohibitions and commandments and their meaning:

Pictograms	Description
	Crushing danger. This pictogram can be found in the area of the swivel arm and should point out a possible crushing danger between the scanner and the swivel arm.

7.7 GENERAL SAFETY REGULATIONS AND OBLIGATIONS

Generally, the following safety regulations and obligations apply when using the scanner:

- The scanner may only be operated in perfect and clean condition.
- It is forbidden to remove, change, bridge, or bypass any protection, safety or monitoring devices.
- It is forbidden to reconstruct or modify the scanner without written approval by CADstar GmbH.
- The operator has to be informed about malfunctions and damages immediately. These have to be resolved promptly with genuine spare parts.
- Only genuine spare parts may be used for repair.
- The safety notes and operating hints from this documentation have to be observed without fail.
- All protection, safety and monitoring devices have to be checked regularly by the operator and maintained (see maintenance plan).
- Only informed, trained and qualified persons may work with this station.
- After maintenance or repair the scanner may only be started with completely attached safety devices.
- The national employee protection regulations and the national safety and accident prevention regulations are valid.
- The area around the scanner must be kept clean. All objects which are not necessary for operation must be removed from the scanner environment.
- No objects or tools may be left on the scanner.
- Climbing the scanner is prohibited.

8 DISPOSAL

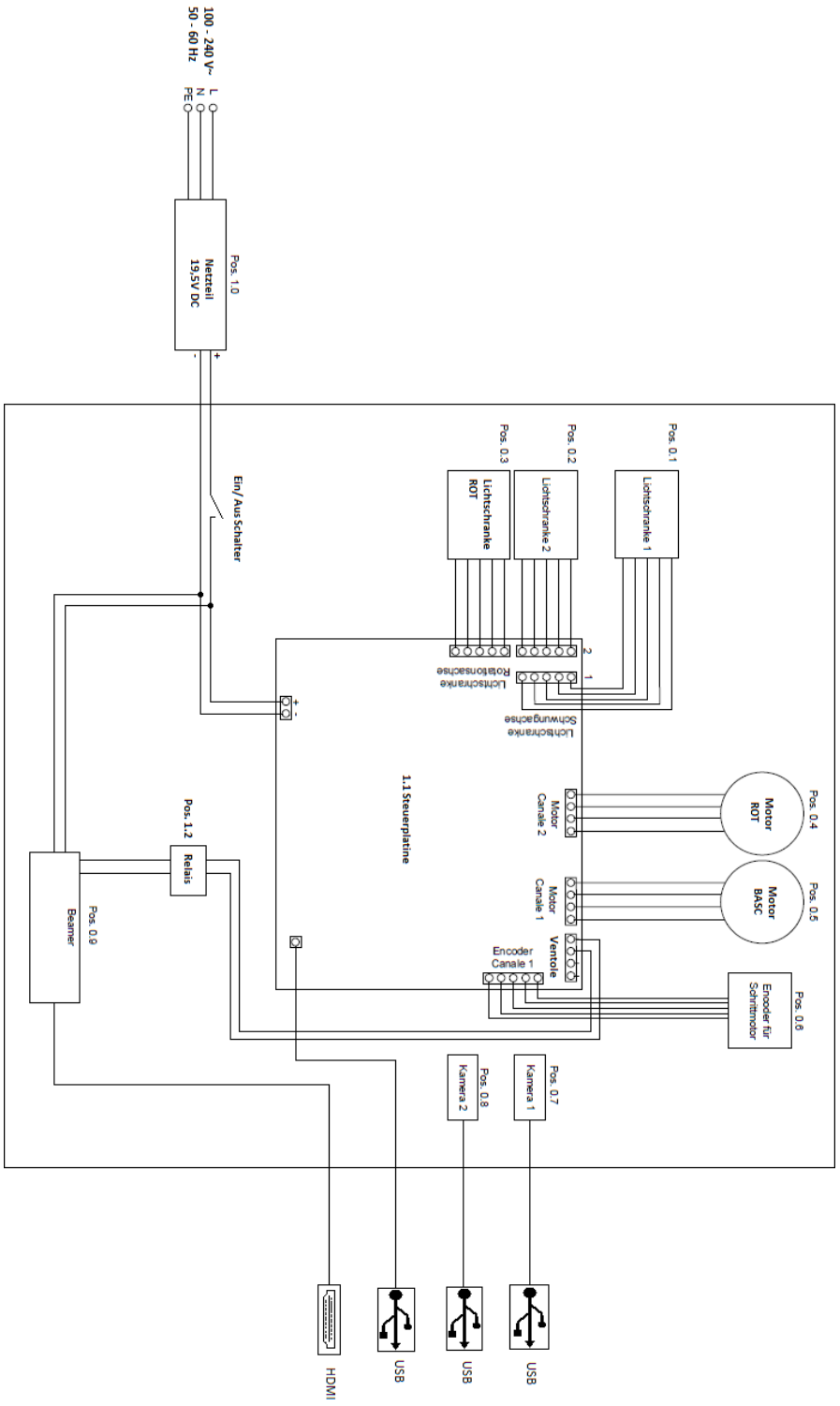
In case of disposal, the scanner may be returned to the manufacturer or distributor.
Mind that the scanner is an electronic device which may only be used for industrial or commercial use.
Hence, disposal via public disposal providers is not possible.
Contact our customer service for disposal.

9 APPENDIX

9.1 TECHNICAL DATA

Designation	Optical 3D- Scanner
Type	CS ULTRA
Manufacturer	CADstar GmbH
Year of Manufacture	2017
Weight	16kg
Dimensions	h385mm; w398mm; d387mm
Supply Voltage	19,5V DC (17,9 – 23,4V DC)
Protection Class	IP11
Operating Temperature Range	18-30°C
Measureable Objects	Jaw Models: all colors possible Imprint scan possible
Clamping Range	Objects up to 80x80mm in model holder
Time for the measurement	Complete Jaw: < 50 sec
Accuracy	< 7µ
Dimensions of the Measuring Range	120 x 120 x 120 mm
Scan- Modes	Wizard, Pro
Multi Die- Adapter Capacity	up to 9 dies
Output Format	STL, OBJ, OFF, PLY
Interfaces/Connections	3x USB 1x HDMI 1x Power connection
Scope of Delivery	1x 3D- Scanner 1x Object Holder 1x 3D- Calibration Body 1x Multi Die- Adapter
Recommended minimum requirements for PC Workstation	OS: Windows 7 Professional Hard Drive Space: 500GB HDD Processor: Intel Core i5 Working Memory: 8GB RAM Graphic Card: NVidia GeForce Graphic Card with min. 2GB RAM (e.g. GTX 750)

9.2 CIRCUIT DIAGRAM



9.3 DECLARATION OF CONFORMITY

(Translation of the Original EU-Declaration of Conformity)

MANUFACTURER:	AUTHORIZED SIGNATORY:
CADstar GmbH Neue Heimat 3 A-5500 Bischofshofen	Georg Dick *(CEO)*

PRODUCT:	DECLARATION:
Optical 3D Scanner CS ULTRA	**CADstar GmbH** hereby confirms that the accompanying product corresponds to the fundamental requirements of the directives 2006/42/EG, 2014/30/EU, 2014/35/EU and the provisions of the directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2011/65/EU. The technical documentation according to Annex VII A of the directive 2006/42/EG has been created.

APPLIED STANDARDS:

EN ISO 12100: 2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
DIN EN 61000-6-1: 2007	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
DIN EN 61000-6-3: 2011	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
DIN EN 60204-1: 2014	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN ISO 4871: 2009	Acoustics - Declaration and verification of noise emission values of machinery and equipment
DIN EN 82079-1:2013	Preparation of instructions for use - Structuring, content and presentation - Part 1: General principles and detailed requirements.

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(Place and Date of Issue) (Name and signature of the person authorized to sign.)

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