DEXDO

DECIDE & DO!



Operating Instructions and Technical Documentation

Water Chiller WKÜ-5000, WKÜ-10000, WKÜ-20000

Translation of the original operating instructions (German)

DEXDO
DECIDE & DO!

Contents

1	**Disclaimer**	**1**
2	**General**	**2**
2.1	Scope of Delivery / Package Contents	2
2.2	Statutory Warranty, Guarantee and Liability	2
2.3	Requirements / Responsibility of the Operating Company	3
2.4	Conformity	3
3	**Safety**	**4**
3.1	Intended Use	4
3.2	Purpose of the System	4
3.3	Requirements for Operating Personnel	4
3.4	Protective Measures	5
3.4.1	Protection Concept	5
3.4.2	Personal Protective Equipment	5
3.4.3	Safety Devices	5
3.4.4	Safety Signs on the Housing of the System	6
3.5	Safety Signs in the Manual	6
3.6	Safety Instructions	7
3.7	Residual Risks	9
3.8	What to Do in an Emergency	9
4	**Technical Data**	**11**
5	**Technical Drawing of the System**	**12**
6	**Description of the System**	**13**
6.1	Component Designations	14
6.2	Control Panel of the System	15
6.3	Functional Description	15
7	**Transport**	**16**
7.1	Safety Instructions	16
8	**Installation and Commissioning of the System**	**17**
8.1	Safety Instructions	17
8.2	Assembly of the System	17
8.2.1	Electrical Connection	18
8.2.2	Cooling Water Connection	18
9	**Operation**	**19**
9.1	Safety Instructions	19

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

9.2	Operation of the System	19
10	**Notes / Warning Messages of the System**	**20**
11	**Maintenance**	**21**
11.1	Service	21
11.2	Safety Instructions	21
11.3	Servicing	22
11.3.1	Twice a Year	22
11.3.2	Once a Year	22
11.4	Refrigerant	22
12	**Decommissioning and Disposal**	**23**
13	**Training Record**	**24**

1 Disclaimer

At the time of publication, this operating manual was written to the best of our knowledge and belief so that it reflects the current state of the art. If anything in the manual is unclear or incorrect, please contact the manufacturer immediately. This manual is a translation of the original German operating instructions. In the event of any discrepancy, the German original shall prevail.

Operating manual November 2026 Version: 07.11.2026

Editor: Lea Budak

This operating manual is the property of: DEXDO GmbH
Winchester Straße 2, 35394 Gießen
Germany
E-mail: kundendienst@dexdo-casting.de

2 General

2.1 Scope of Delivery / Package Contents

Designation	Quantity	Remark
Water chiller	1 x	

Further accessories are available separately.

Please check the scope of delivery of the system immediately on receipt. If any transport damage or missing items are found, these must be reported to the carrier.

2.2 Statutory Warranty, Guarantee and Liability

The statutory rights for defects apply. For consumers, the limitation period is two years from delivery of the goods; for businesses, § 9 of our General Terms and Conditions applies.

In addition to the statutory warranty, DEXDO GmbH, Winchester Straße 2, 35394 Gießen, Germany, grants a 12-month guarantee on this device from the date of delivery. The guarantee covers the free rectification of material and manufacturing defects, at our discretion by repair or replacement. To make a claim, a notification in text form to marktplatz@dexdo-online.de within the guarantee period is sufficient. Your statutory rights for defects exist independently of this guarantee and are neither restricted nor affected by it.

We keep spare and wear parts (e.g. water filters, seals, hoses) in stock or obtainable for at least 5 years from purchase. We offer repairs through our service.

Improper use or incorrect installation can cause hazards as well as damage. As far as legally permitted, the warranty is excluded for damage caused by the following:

- Damage resulting from operation by untrained personnel
- Damage caused by incorrect operation or misconduct
- Damage caused by incorrect installation
- Damage caused by improper use
- Wear parts

Subject to technical changes.

2.3 Requirements / Responsibility of the Operating Company

The applicable accident prevention regulations must be observed. Likewise, only trained personnel may operate this system. During operation, the system must be supervised by trained personnel.

The operating personnel must have read and understood the operating manual before they operate the system. No unauthorised person may operate the system either. The operating company is responsible for ensuring compliance.

This operating manual must be kept within easy reach of the machine.

Servicing and repairs may only be carried out by authorised personnel and by the manufacturer.

2.4 Conformity

The system complies with the relevant EU directives. An EU declaration of conformity is available and can be requested from DEXDO GmbH.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

3 Safety

3.1 Intended Use

The system must be used in accordance with its intended purpose. It is important that the operating manual and the safety regulations have been read and understood by the operating personnel.

Any use is improper if it does not correspond to the original purpose.

Safety is not guaranteed if the system is modified. Therefore, all unauthorised modifications are prohibited.

The connection and installation of the device must have been carried out in accordance with the specifications. During operation, the stated operating parameters should not be exceeded.

Spare parts and wear parts should be obtained from the manufacturer. Approval from DEXDO must be obtained before third-party parts are used.

3.2 Purpose of the System

The system is designed as a water cooling system.

3.3 Requirements for Operating Personnel

Only trained personnel may operate the system. The work steps must be laid down in a fixed work schedule in accordance with the safety regulations. The dependencies for operation, servicing and maintenance must be clearly defined. The system may only be operated after an order has been given.

During training or when personnel are being instructed, trained supervisors must be present.

Maintenance work may only be carried out by suitable personnel.

The operating personnel must keep the safety regulations and operating instructions available in the work area at all times. These must have been read and understood before work begins.

The operating company must ensure that the safety regulations are observed.

3.4 Protective Measures

The safe operation of the system is governed by this operating manual.

All operators of the system must know the principles of the applicable occupational safety regulations. This also applies to the safety instructions set out in the operating manual.

The applicable regulations of the employers' liability insurance association (Berufsgenossenschaft) on accident prevention must be observed.

3.4.1 Protection Concept

This protection concept covers the protection of personnel from injury, of the system from damage, and of the environment.

Protective measures:

- Emergency stop switch, protective guard
- Safety instructions in the operating manual
- Marking of the system with safety signs

3.4.2 Personal Protective Equipment

The following items form part of the personal protective equipment of the operating personnel:

- Protective gloves (cold-resistant when working on the refrigerant circuit)
- Safety goggles
- Safety shoes

3.4.3 Safety Devices

All safety devices must be properly installed and in operation to ensure the safety of the system. The system must never be operated without safety devices. They may only be removed for maintenance work when the main switch is switched off and locked, and must be refitted and in operation before the system is put back into service.

The switch with emergency stop function must always be easy to reach.



NOTICE!
Do not tamper with safety devices!

NOTICE!
The emergency stop must be pressed in the event of danger. It shuts the system down.

3.4.4 Safety Signs on the Housing of the System

The following safety signs are fitted to the system:

Safety sign	Meaning	Safety sign	Meaning
	Warning of dangerous electrical voltage.		Warning of cold surfaces.
	Warning of hot surfaces.		

If the signs are worn, dirty or missing, they must be refitted or, if dirty, cleaned.

3.5 Safety Signs in the Manual

DANGER!
Death, serious injury or considerable damage to property will occur if the appropriate precautions are not taken.

WARNING!
Death, serious injury or considerable damage to property can occur if the appropriate precautions are not taken.

CAUTION!
Minor injury can occur if the appropriate precautions are not taken.

NOTICE!
Damage to property can occur if the appropriate precautions are not taken.

Information / Note
Here you will find information and notes to help you carry out the following tasks effectively and safely.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

3.6 Safety Instructions

The condition of the system must be checked before commissioning. Connection lines must also be checked. The system may only be put into operation after this check, and only if there are no defects.

The system must not be operated if:

- faults occur
- damage is present
- the system has not been checked in accordance with the safety instructions
- it is used unsupervised

Irregularities must also be detected early during operation in order to avoid hazards.



DANGER!
Water can escape from damaged lines. Hot cooling water can cause burns.



NOTICE!
Escaping water can cause short circuits in electrical equipment.



NOTICE!
Escaping water can cause environmental damage.



WARNING!
Hot surfaces can cause serious injuries.





WARNING!
The power supply must be disconnected for servicing and maintenance.



Note!
Before the mains plug is pulled, the system must be properly switched off.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de







DANGER!

Touching live parts is life-threatening. Only authorised qualified personnel may work on electrical equipment.

- Some parts remain live even after switching off.
- Always keep control cabinets closed.
- Do not carry out any work on live parts.
- Rectify loose connections.
- Damaged lines must be replaced immediately.
- Cables must be laid without kinks and free of tension. They must not be routed through the operator's work area.



DANGER!

Risk of health damage from media escaping from damaged hoses. Risk of damage to the system.

- Rectify loose connections. Replace damaged hoses immediately. Only carry out work with the mains plug pulled.
- Hoses must be laid without kinks and free of tension. They must not be routed through the operator's work area.



WARNING!

Risk of burns.

- Burns from hot parts of the system



WARNING!

Risk of burns.

- Risk of cold burns from cold parts of the system



DANGER!

Injuries caused by incorrect forklift transport.

- Make sure that the system is loaded onto the forklift from the correct side and in an upright position.
- Falling parts can damage the system and injure people.
- Have transport carried out only by trained transport personnel.



Note

DEXDO is not liable for transport damage caused by improper handling of the system.



WARNING!

Risk of injury.
Depressurise hoses under pressure before removing them.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de



WARNING!
If there are liquids on the floor in the operating area, there is a risk of slipping and injury. The spilled substances must be removed immediately.



DANGER!
Risk of suffocation.

- Suffocation from inhaling escaping refrigerant.

3.7 Residual Risks

Risk description	Risk reduction
Risk of frostbite	Wear protective equipment, do not touch cold parts of the system
Risk from rotating parts of the system	Do not tamper with the protective guard. Do not put any body parts through the protective guard
Risk of suffocation	Instruct persons. Wear personal protective equipment, detect refrigerant leaks early, ventilate
Risk of burns	Wear personal protective equipment, do not touch hot parts
Tipping over of the system due to improper transport	Observe the transport instructions

3.8 What to Do in an Emergency

Personnel must be trained in what to do in an emergency. How to shut down the system must be demonstrated during the training.

In an emergency, proceed as follows:

- Press the emergency stop or the main switch and switch the system off.
- Pull the mains plug, provided this can be done without risk.
- Clear the danger area.
- If refrigerant escapes, ventilate the room immediately and do not inhale the escaping refrigerant.

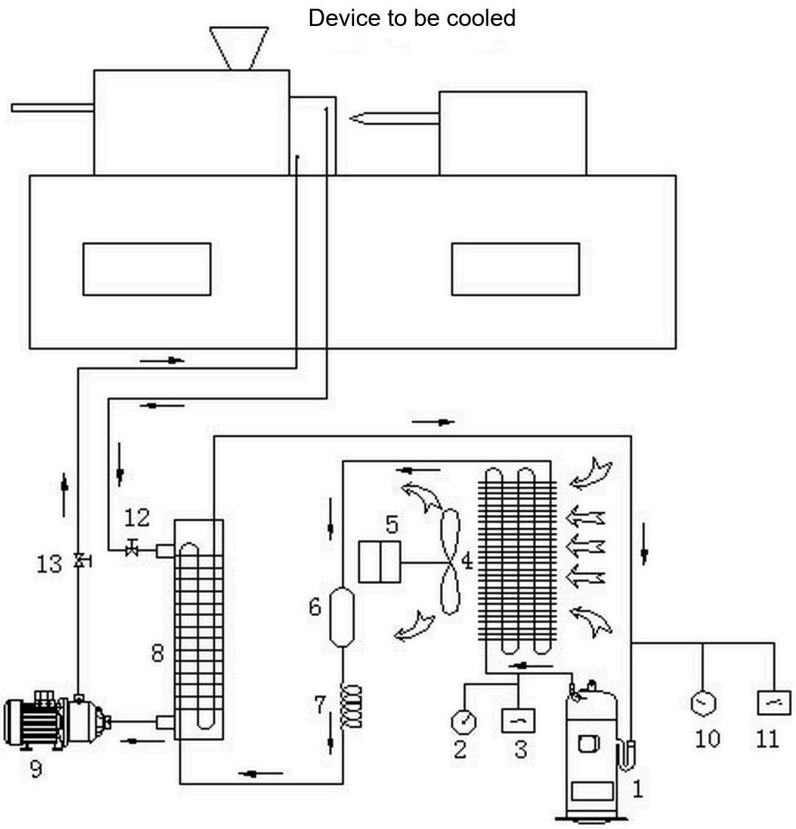
- Fight fires with a suitable extinguishing agent, do not use water on electrical systems.
- Cool burns with water.
- Call the emergency number 112.
- Inform the manufacturer (kundendienst@dexdo-casting.de).

4 Technical Data

Feature	WKÜ-5000	WKÜ-10000	WKÜ-20000
Manufacturer type	FIC-5A-G	FIC-10A-G	FIC-20A-G
Power connection	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz
Rated cooling capacity	15.26 kW	45 kW	approx. 85-95 kW
Total power	5.84 kW	10.56 kW	approx. 18-20 kW
Compressor type	Rotary compressor	Scroll compressor	Twin scroll compressor
Refrigerant	R410a	R410a	R410a
Noise level	< 81 dB(A)	< 73 dB(A)	< 78 dB(A)
Pump power	0.37 kW	1.5 kW	2.2-3 kW
Delivery head	30 m	40 m	45-50 m
Flow rate	30 l/min	66 l/min	120-160 l/min
Ambient temperature	< 40 °C	< 40 °C	< 40 °C
Water temperature range	8-30 °C	8-30 °C	8-30 °C
Temperature accuracy	±0.5 °C	±1 °C	±1 °C
Tank volume	60 l	90 l	150-200 l
Water connection inlet/outlet	Rp 3/4"	Rp 1"	Rp 1 1/2" or DN40
Evaporator type	Coil evaporator in the water tank	Stainless steel plate heat exchanger	Stainless steel plate heat exchanger
Throttling system	Capillary tube	Thermal expansion valve	Thermal expansion valve
Dimensions (L x W x H)	627 x 1270 x 1264 mm	701 x 1572 x 1383 mm	approx. 1600 x 900 x 1700 mm
Weight	215 kg	350 kg	approx. 550 kg

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

5 Technical Drawing of the System



Schematic diagram of the system (refrigerant circuit and cooling water circuit)

1. Compressor
2. High-pressure gauge
3. High-pressure protection switch
4. Condenser
5. Fan
6. Dryer / filter
7. Throttling device (capillary tube or thermal expansion valve, depending on type)
8. Evaporator (depending on type)
9. Water pump
10. Low-pressure gauge
11. Low-pressure protection switch
12. Cooling water valve
13. Valve in the cooling water flow

The diagram shows the functional principle. The design and arrangement of the components may differ depending on the type.

6 Description of the System

The assemblies of the system:

- Mains cable connection
- Cooling water connections
- Water filter
- Compressor
- Heat exchanger
- Fan
- Control panel
- Control cabinet

The control panel contains:

- Main switch
- Analogue displays
- Temperature control
- Indicator lamps

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

6.1 Component Designations



Front

1. Fan
2. Display
3. Pressure gauge (high pressure / low pressure)
4. Swivel castors

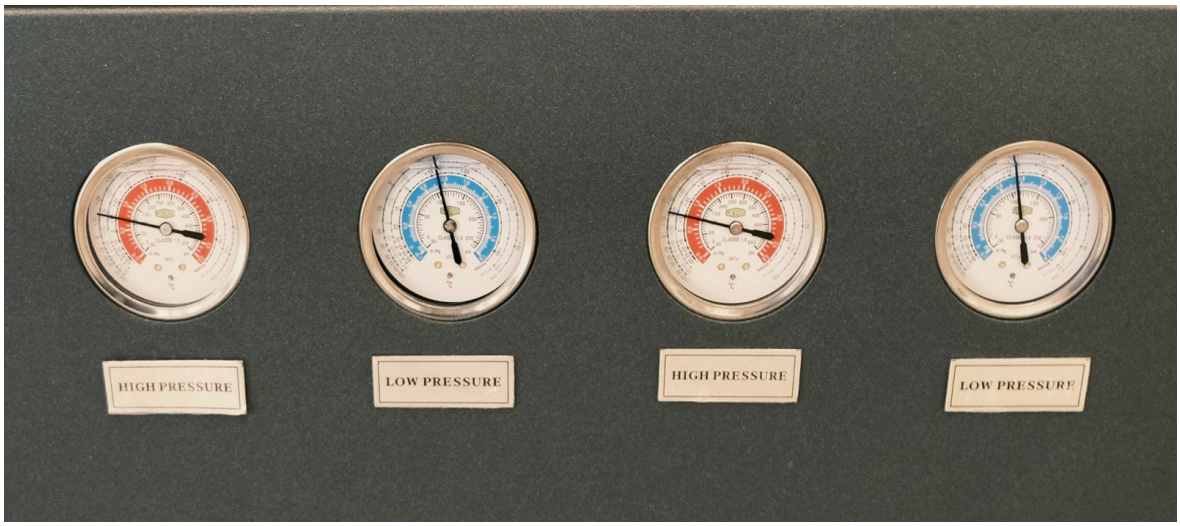


Rear

1. Fan
2. Return (inlet)
3. Refill connection
4. Overflow
5. Flow (outlet)
6. Drain
7. Water level indicator

Example illustration. Design and arrangement may differ depending on the type.

Pressure Gauges on the Front



From left: high pressure, low pressure, high pressure, low pressure

6.2 Control Panel of the System

The water chiller is operated via the display behind the viewing window and a rotary push knob: turn the knob to select a value or menu item, and press it to confirm. The display shows the current water temperature, the set temperature and warning messages.

6.3 Functional Description

The water chiller is used to lower the temperature of the cooling water circuit, e.g. of melting systems. As the water passes through the water chiller, heat is extracted from it and released into the ambient air via a refrigerant circuit. The system works on the heat pump principle and provides effective and efficient cooling.

7 Transport

7.1 Safety Instructions



DANGER!

Injuries caused by incorrect forklift transport.

- Make sure that the system is loaded onto the forklift from the correct side and in an upright position.
- Falling parts can damage the system and injure people.
- Have transport carried out only by trained transport personnel.
- Wear personal protective equipment.

Note

DEXDO is not liable for damage caused by improper transport.

The machine must be transported with a forklift or pallet truck.

To prevent water leaking and other damage to the system, it must always be transported upright.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

8 Installation and Commissioning of the System

8.1 Safety Instructions



DANGER!
Only authorised qualified personnel may carry out the electrical connection.



CAUTION!
The mains connection must be made in accordance with the requirements of the energy supplier and the applicable VDE regulations. Errors during connection can lead to injuries and damage to the system.



Note
Use only the correct 5-pin mains plug.



NOTICE!
Only the operating voltage and mains frequency stated on the rating plate may be used to connect the system.



NOTICE!
Refrigerant escaping due to damage must not be inhaled.

8.2 Assembly of the System

The installation and work area of the system must have a straight and level floor. There must be 1.0 m of free space behind the system and to its left and right. The work area in front of the system must be at least 0.5 m.

The air in the area of the system must not contain corrosive substances or metal shavings. The air humidity should also be low in order to extend the service life of the system.

The system may only be installed in environments where the dew point is 35 °C or lower.

Power and water lines must not be routed through the work area of the operating personnel. Check them for damage before assembly and then connect them to the corresponding connections on the machine.

8.2.1 Electrical Connection

The system requires a 5-pin three-phase connection (400 V, 50 Hz), which must be installed by qualified personnel. The system may only be connected to the frequency and voltage stamped on the rating plate.

If the fans and the pump run in the wrong direction of rotation, the phases have been connected with the wrong rotation sense.

8.2.2 Cooling Water Connection

Choose the diameter of the water line to match the connection of the system. If you use reducers, the pressure rises sharply and the system goes into fault mode He 09 (cooling water pump overload). In addition, the cooling capacity and the power consumption are adversely affected.

- Damaged lines must not be connected to the machine
- The lines must be seated correctly before the system may be put into operation



Note
Soft water is better than hard water for operating the system.

- With hard water, the system must be descaled twice a year

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

9 Operation

9.1 Safety Instructions



CAUTION!
Before the system is operated, the system, its connection lines and all consumables must be checked for damage, wear and contamination. If any defects are present, the system must not be put into operation.



WARNING!
Hot surfaces can cause serious injuries.



NOTICE!
Refrigerant escaping due to damage must not be inhaled.

9.2 Operation of the System

1. Check the power supply, the earthing and the water circuit.
2. Open the taps of the water circuit.
3. Switch on the main switch of the system.
4. Set the desired water temperature with the rotary push knob: turn to set, press to confirm.
5. To switch the machine off, proceed in the reverse order.
6. If a problem occurs during operation, an alarm indicator lights up and a signal tone sounds. The system then switches to fault mode. The corresponding messages and their meaning are listed in the chapter “Notes / Warning Messages of the System”.

10 Notes / Warning Messages of the System

Message	Description	Remedy
He 01	Phase error	Check electrical connection
He 02	Compressor 1 high pressure	Contact customer service
He 03	Compressor 1 low pressure	Contact customer service
He 04	Compressor 1 overload	Contact customer service
He 05	Compressor 2 high pressure	Contact customer service
He 06	Compressor 2 low pressure	Contact customer service
He 07	Compressor 2 overload	Contact customer service
He 08	Coolant low	Contact customer service
He 09	Cooling water pump overload	Contact customer service
He 10	Fan overheated	Contact customer service
He 11	Fan overload	Contact customer service
He 12	Temperature too low	Contact customer service
He 13	Sensor open	Contact customer service
He 14	Sensor short circuit	Contact customer service
He 15	Icing	Wait until the ice has thawed

The messages for compressor 2 apply only to devices with two compressors.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

11 Maintenance

11.1 Service

The DEXDO service is available to you at the following contact:

DEXDO GmbH
Winchester Straße 2, 35394 Gießen
E-mail: kundendienst@dexdo-casting.de

11.2 Safety Instructions



WARNING!
The power supply must be disconnected for servicing and maintenance.



Note!
Before the mains plug is pulled, the system must be properly switched off.



DANGER!
Touching live parts is life-threatening. Only authorised qualified personnel may work on electrical equipment.

- Some parts remain live even after switching off.
- Always keep control cabinets closed.
- Do not carry out any work on live parts.
- Rectify loose connections.
- Replace damaged, scorched or burnt-through cables immediately. Only carry out work with the mains plug pulled.
- Cables must not be trapped or crushed. Cables must be laid so that they do not create trip hazards and cannot be damaged.



WARNING!
Risk of injury.
Depressurise hoses under pressure before removing them.



WARNING!
If there are liquids on the floor in the operating area, there is a risk of slipping and injury. The spilled substances must be removed immediately.



WARNING!
Hot surfaces can cause serious injuries.



WARNING!
Touching cold parts of the system can cause injuries.

11.3 Servicing

Maintenance work increases the service life of the system and reduces failures. The specified servicing and maintenance work should therefore be carried out.

11.3.1 Twice a Year

- If the water is hard: flush the cooling water system with a descaler

11.3.2 Once a Year

- Check electrical connections for secure fastening and tighten them
- Check the connections of the cooling system and tighten them

11.4 Refrigerant

Only the refrigerant R410a may be used in the system. It must under no circumstances be mixed with other refrigerants. In the event of faults in system parts that come into contact with refrigerant, a refrigeration engineer must be called in. Refrigerant cylinders must be stored in accordance with the respective manufacturer's instructions.

After servicing work on the refrigerant system, the system must be checked with a leak detector calibrated to 3 g per year.

12 Decommissioning and Disposal

To decommission and dispose of the system, proceed as follows:

- Switch the system off and disconnect it from the mains.
- Drain the cooling water via the cooling water drain and disconnect the water connections.
- Have the refrigerant R410a extracted by certified qualified personnel only. Refrigerant must not be released into the environment.
- Dispose of electrical and electronic parts in accordance with the applicable regulations (German Electrical and Electronic Equipment Act, ElektroG) or return them to the manufacturer.

DEXDO GmbH Winchester Straße 2, 35394 Gießen kundendienst@dexdo-casting.de

13 Training Record

The persons listed below have been instructed, on the basis of the operating instructions, on the hazards that arise and on safety measures, as well as on the correct transport, set-up, commissioning, operation and maintenance of the system.

The subjects of the instruction are all points found in the operating instructions.

Number	Name, first name	Date	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			