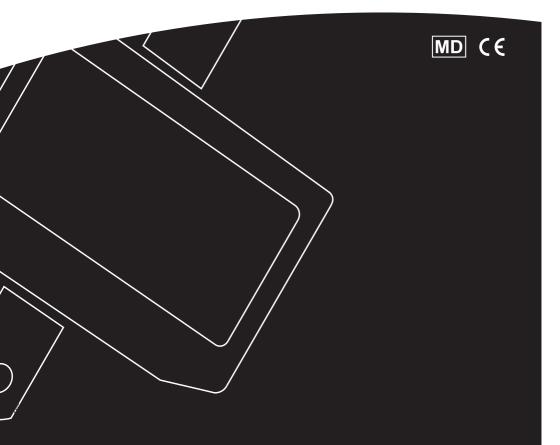


#### GB/US .... Digital Scale model RS

User manual - vers. 101.01



Guldmann<sup>™</sup>



### GB . . . . . . . Digital Scale model RS

Item no.: 560602 & 560604

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#### General provisions



1.00

Read this user manual carefully before using the digital scale, as it supplies important information concerning use, safety and maintenance.

The descriptions and illustrations in these instructions are not binding. Guldmann reserves the right to make changes to the product that they deem to be necessary in order to improve the product, without them being obligated to update this publication.

**Product type:** Professional electronic digital scale for mobile lifters and ceiling hoists.

Conventions: In this user manual, the following symbols are used

CE	0476 EC type-approved for medical use
Μ	Metrological certification and type approval
	Accuracy class
$\Lambda$	ATTENTION! The digital scale must be mounted correctly before it is placed into use. In the event of erroneous installation, damage may be caused to the digital scale and injury to the patient.
X	Must not be disposed of as ordinary household refuse, but must be brought to recycling.
Ť	Type B in accordance with UL/EN 60601-1
۵D	Battery operated
-	Indication of weight function
<i>→</i> 0←	Indication on stable weight
((@))	Interference may arise in the vicinity of the devices
	Dual insulation (Class II)

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#### 2.00 Intended use

This equipment must be used for weighing a person lifted in a sling for general diagnostic purposes.

**Application area:** at institutions, hospitals and specialised medical clinics. We recommend that the unit be used in surroundings that are not subjected to magnetic disturbances.

**Personnel who may use the product:** Trained caregivers, specialised operators and physicians, who are familiar with the procedures for proper use.

**Controls and responsibility:** The medical equipment must be used under the supervision of a qualified physician (only for Class III scale) or qualified personnel with responsibility for maintenance and periodic controls, and who are familiar with all the safety procedures.

**Limitations of use:** This medical equipment must only be used as described in this user manual.

#### Safety



2.01

The operators must read this user manual carefully, follow the directions in the manual and learn the correct procedures for the use and maintenance of the digital scale.

These user instructions contain important information on the mounting, use and maintenance of the digital scale.

The manufacturer assumes no liability for direct or indirect damages, including loss of earnings or other commercial damage, which may be due to use of the product that is not in accordance with what is described in this user manual.

Save this user manual and the declaration of conformity for later use, and use them when training personnel.

- · Avoid overloading the digital scale beyond its maximum capacity
- Avoid sudden loading of the digital scale
- · Do not use sharp or pointed objects to press the keys
- · Do not try to open the digital scale
- · Do not remove the seals on the digital scale
- · The battery poles must not be short-circuited
- · Do not submerge the digital scale in water or other liquids
- Perform regular maintenance and subsequent measurement checks (see section 11.00)

**NOTE:** The medical equipment requires special precautions concerning electromagnetic compatibility, and must be installed and used with respect to the information in accompanying documents.



#### ATTENTION

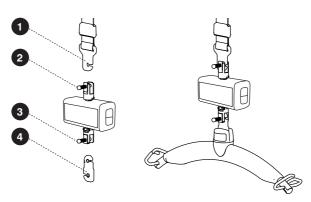
Mounting of the digital scale must be performed by qualified personnel, and before use it must be checked that the different parts are mounted correctly, such that the person is weighed in a safe and sensible manner. Incorrect mounting may cause risks of falls and involve serious consequences for the person.

	<ul> <li>After mounting of the digital scale and before weighing of the person, the personnel must ensure that:</li> <li>The weighing will be performed over "soft" items such as for example a mattress, pillows, bed or other soft elements, in order to minimise the consequences of a possible accident</li> <li>The model RS digital scale and the sling are in the VERTICAL POSITION</li> <li>The personnel must ALWAYS follow and keep their focus on the sling and the person during the lift in order to avoid swinging and possible movements of the digital scale</li> <li>The ceiling hoist or the mobile lifter with digital scale and the person in the sling must not be moving, relocated or turned during the weighing</li> <li>Once the weighing has been concluded, the sling must be taken off the person and the digital scale dismounted</li> </ul>
NO TORSION	Swinging and turning of the scale may cause incorrect weighing. The personnel must therefore ensure that the person remains calm during the weighing.
NO TORSION	Avoid swinging and sudden movements of the digital scale, which may damage the scale and result in incorrect weighing.

- Always follow the applicable rules with the use of electrical components that are subject to increased safety requirements.
- Incorrect installation will invalidate the warranty.
- The digital scale is intended for indoor use.
- Comply with the permissible room temperatures for operation.
- The digital scale complies with the requirements for electromagnetic compatibility.
- The maximum values specified in the applicable standards must not be exceeded.
- Avoid overloading the digital scale. Overloading will be indicated by an audible signal.



Use



There are many different mounting possibilities with a digital scale, depending upon the situation in which it is being used. The most common manners of mounting the digital scale are described below. A number of the mounting combinations in the configuration table at the end of this chapter are illustrated.

- 1. Hook from ceiling hoist or mobile lifter
- 2. Quick release button on the digital scale's top
- 3. Quick release button on the digital scale's bottom
- 4. Adapter for mounting of lifting hanger
- 1. A. Mounting of the digital scale on a ceiling hoist GH1, GH3, GHZ or a mobile lifter GL5, GL5.1

Fasten the digital scale to the hook on the ceiling hoist or the mobile lifter by pressing on the quick release button (2) and fastening the hook (1).

## B. Mounting of the digital scale on a ceiling hoist GH2 or a "Universal" oval hook

Fasten the digital scale to the hook on the ceiling hoist by opening the GH2 snap hook (1) or the oval hook and fasten the hook on the quick release button (2).

#### C. Mounting of the digital scale on a mobile lifter GL

Fasten the digital scale to the mobile lifter using an adapter fitted on the mobile lifter's bar.

Fasten the digital scale to the adapter (see page 11) on the mobile lifter by pressing on the quick release button (2) and fastening the adapter.

- 2. Mounting of adapter hook from lifting hanger to the digital scale Press on the quick release button (3) and fasten the adapter hook (4). Fasten the lifting hanger by inserting the adapter hook (4) on the lifting hanger.
- 3. Attach the desired sling on the lifting hanger and reset the digital scale (see section 4.00). The display will subsequently show 0.0.
- 4. Remove the sling from the hanger. Place the sling on the person and attach it on the lifting hanger again.
- 5. Carefully lift the person. When the sling with the person is at rest and freely suspended, the relevant weight will be shown on the display.

#### Important

Always reset the scale before weighing takes place.

#### Note:

The power saving function will automatically shut off the display after 30 sec. if the scale has no load. Can be changed (see section 7.00).

6. Carefully lower the person after the scale has been read.

#### Warning

This scale has been produced in order to weigh the person in connection with him/her being relocated, for example between a bed and a chair. In connection with reduced lifting height, it may be necessary to divide the process in 2, weighing of the person and subsequent detachment of the scale, and then performing the final relocation, for example between a bed and chair. The scale has not been produced for use in connection with transport of the person. In the event of transport, the scale must be detached.

#### 2.03 Configuration table

Configuration table for D	Digital scale	
Lifting capacity, max.	300 kg	300 kg
Length	200 mm	200 mm
Product	Ceiling hoist GH1 / GH3 movable	Ceiling hoist GH2
Lifter interface		
Adapter interface top	NA	NA
Digital scale RS		
Adapter for mounting of lifting hanger		
Hanger interface		

Configuration table for E	Digital scale		
Lifting capacity, max.		300 kg	
Length	200 mm	260 mm	365 mm
Product	Mobile lifter GL5 / GL5.1	Mobile lifter GL	Universal
Lifter interface			NA
Adapter interface top	NA	Ĵ	
Digital scale RS			
Adapter for mounting of lifting hanger			
Hanger interface			NA

#### 2.04 Accessories

Item description	Item No.	Installation length	Illustration
Oval hook	561628	107.5 mm	
GH3 Adapter for Mobile lifter	552532	60 mm	Ĵ
Adapter for mounting of lifting hanger	558898	45 mm	

#### 2.05 EMC - Information

#### Manufacturer's instructions and declaration - Electromagnetic emissions

The model RS electronic digital scale is intended for use in the electromagnetic environments, such as are specified below. The customer or the user must ensure that the scale is used in such an environment.

Emission test	Conformity	Guidelines for Electromagnetic environment guidance	
RF emissions CISPR11	Group 1 Class B	The model RS digital scale uses only RF ener- gy for its internal functionality. Hence these RF emissions are very low, and there is very little probability that they would cause any interfer- ence in nearby electronic equipment.	
RF emissions CISPR11	Group 1 Class B	The model RS digital scale is suitable for use in all healthcare and hospital systems that are	
Harmonic emissions IEC 61000-3-2	Class A	connected to the public low voltage distribution grid.	
Voltage fluc- tuations / voltage emissions IEC 61000-3-2	Conformity		

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#### Manufacturer's instructions and declaration - Electromagnetic immunity

The model RS electronic digital scale is designed to function in electromagnetic environments that are specified below. The customer or the user must ensure that the scale is used in this environment.

Immunity test	Conformity	Guidelines for electromagnetic environment
Electrostatic discharge (ESD) IEC/NEK- EN61000 - 4 -2	6 kV contact 8 kV air	The floors should be of wood, concrete or ceramic material. If the floors are covered by synthetic material, the relative humidity must be at least 30%.
Electrical rapid transients/burst NEK-IEC/ EN61000 - 4 - 4	+/-2 kV power supply +/-1 kV to inbound/ outbound lines	The power supply quality must be the same as in an ordinary commercial or hospital environ- ment.
Surge IEC/NEK- EN61000 - 4 - 5	+/-2 kV differential mode +/-1kV common mode	The power supply quality must be the same as in an ordinary commercial or hospital environ- ment.
Voltage dips, brief interruptions and voltage vari- ation IEC/NEK- EN61000 - 4 - 11	<5 % UT in 0.5 cycles 40 % UT in 05 cycles 70 % UT in 25 cycles <5 % UT in 5 sec. Note= UT is the value of the power supply voltage.	The power supply quality must be the same as in an ordinary commercial or hospital environ- ment.
Magnetic field at power frequen- cies IEC/NEK- EN61000 - 4 - 8	3 A/m	The product power frequency magnetic fields should be at levels af a typical location in a typical commercial or hospital environment.

#### Manufacturer's instructions and declaration - Electromagnetic immunity

The model RS electronic digital scale is intended for use in the electromagnetic environments as specified below. The customer or the user must ensure that the scale is used in such an enviroment.

	I	
Immunity test	Conformity	Guidelines for electromagnetic environment
Immunity against conductor-bound disruptions IEC/ NEK-EN61000 - 4 - 6	3 Vrms 150 kHz to 80 MHz (for devices that are not life-sup- porting)	Portable and mobile radio frequency-based communications equipment must not be used closer to the device, including conductors, than the recommended distance calculated based on the applicable formula for the transmitter's frequency. Recommended distance between
Immunity radi- ated IEC/NEK- EN61000 - 4 - 3	3 V/m 80 MHz to 2.5 GHz (for devices that are not life-sup- porting)	devices d = $1.2\sqrt{P}$ d = $1.2\sqrt{P}$ From 80 MHz to 800 MHz d = $2.3\sqrt{P}$ From 800 MHz to 2.5 GHz, where P is the maximum rated output power for the transmitter in watts (W) as per the man- ufacturer of the transmitter, and d is the rec- ommended, seperation distance in metres (m). The field strengths from fixed radio frequency transmitters, as measured in an electromagnetic examination of the location, a ought to be lower than the compliance level in each frequency range b. Interference may occur in the area around devices, which is marked with the follow- ing symbol: (())

At 80 MHz and 800 MHz the higher frequency range applies. It is possible that these guidelines do not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.

- a) Field strengths from fixed transmitters, such as base stations for radiotelephones (mobile/wireless) and land mobile radios, amateur radio equipment, AM and FM radio transmitters and TV broadcasting, cannot be estimated reliably theoretically. Consider performing an electromagnetic field survey in order to assess the electromagnetic environment that is caused by fixed radio frequency transmitters. If the measured field strength at the location where the device is being used exceeds the compliance level for radio frequency energy that will be used, then you should observe the device in order to check that its operation is normal. If abnormal operation is observed, further precautions may be necessary, for example turning or relocating the device.
- b) Over the frequency range from 150 kHz to 80 MHz the field strength should be less than 3 V/m.

#### Recommended distance between RS Digital scale and portable- and mobile radio frequency-based communications equipment

The model RS digital scale is intended for use in an electromagnetic environment, where radiated RF disruptions are under control. The customer or user of device may assist in preventing electromagnetic disruptions by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, with respect to the communications equipment's maximum output power.

Maximum rated	Distance with respect to the transmitter's frequency m		
output effect for transmitter W	150 kHz to 80 MHz d = 1.2 √P	80 MHz to 800 MHz d = 1.2 √P	800 MHz to 2.5 GHz d = 2.3 √P
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters with a rated maximum output power not mentioned above, the recommended distance in metres (m) can be estimated using the formula that applies for the transmitter frequency, where P is the transmitter's maximum rated output power in watts (W) according to the manufacturer of the transmitter.

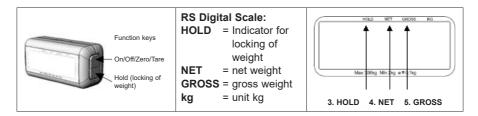
**Note:** At 80 MHz and 800 MHz the higher frequency range applies. It is possible that these guidelines do not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.

#### 3.00 Technical properties

Model	RS
Manufacturer	Wunder Sa.Bi. Srl- Trezzo Sull'Adda (MI), Italy
Capacity and division	Max. 300 kg, e=100 g
OIML approval	Class III
Measurement unit	Kg
Display	LCD 25 mm with 5 digits
Dimensions mm	(W) 120 x (L) 70 x (H) 160 mm
Function keys	ON/ZERO/OFF, HOLD, TARE
Power supply	6 alkaline batteries AAA
Operating temperature	0 °C / 40 °C
4.00	Complies with Directive 2011/65/EU
KOHS2 2011/65/EU	
IP54	Protection IP54 (Protects against dust and spray)

#### 4.00

#### Control panel



#### 1. ON/OFF/ZERO/TARE:

- 1. Push the ON/OFF key to activate the digital scale, and hold the key down for 3 seconds to deactivate the scale.
- 2. Push the ZERO key in order to reset the digital scale (corresponds to approx. +/-2 % of the maximum capacity).
- 3. Push the TARE key to find the tare weight.

#### 2. HOLD:

Push this key in order to lock the result of the weighing during the weighing phase. Push the HOLD key again to deactivate the HOLD function.

#### 3. NET:

Net weight function

#### 4. HOLD:

Gross weight function

#### 5.00 Weighing mode

Please read the following important guidelines before you read the detailed instructions on how you should use the weighing functions:

- You must always make sure that the display shows "Zero" before use. Press the ZERO key if this is not the case.
- The professional medical digital scale is designed to perform weighing when the weight is stable. Only first at this point in time can a correct weight be read.



- A tilt of more than  $3^\circ$  of the digital scale will result in an incorrect reading
- Swinging and turning of the scale may cause incorrect weighing. The personnel must therefore ensure that the person remains calm during the weighing.
- Avoid tilting or rotating the digital scale horizontally

#### 6.00 Settings and functions

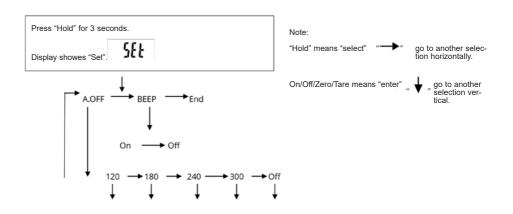
**Adjustment of time for automatic shut-off:** This function concerns a period of time the digital scale is not in operation. Once the amount of time set has passed, the digital scale will automatically be switched off.

Time for automatic shut-off: Programmable 120 sec / 180 sec / 240 sec / 300 sec.

Adjustment of auditory signal: This function concerns the choice of the setting for the auditory signal for ON (switched on) or OFF (switched off). This depends upon what the user prefers.

Auditory signal: On/Off

7.00 Choice / change of automatic shut-off and auditory signal



A_OFF	Setting for time for automatic shut-off -120/180/240/300/off (seconds)
ЬЕЕР	Auditory signal ON (beep on) / OFF (beep off)
End	Save the settings

#### 8.00 Settings for the digital scale step-by-step

Example: Setting with AUTO-OFF (auto-shut-off) after 180 seconds and with disconnected auditory signal.

- Step 1. Press HOLD for 3 seconds in order to go to the settings status SETUP.
- Step 2. Press ZERO in order to go to the status A.OFF, when A.OFF is shown.
- Step 3. Press HOLD in order to select 180 S = time for automatic shut-off is 180 sec.
- Step 4. Press ZERO in order to select and go back to the A.OFF status, and press HOLD in order to switch to the setting status BEEP.
- Step 5. Press ZERO in order to go to the setting status BEEP, and press HOLD again in order to choose between ON and OFF.
- Step 6. Press ZERO in order to select and go back to the setting status BEEP.
- Step 7. Press HOLD in order to select END, and press ZERO in order to end selecting the settings.

#### 9.00 Replacement of battery

The model RS digital scale uses 6 AAA alkaline batteries. Read the instructions below before you use the digital scale.

- 1. The cover for the battery case is located on the back side
- 2. Remove the battery case cover on the digital scale.





3. Take the battery holder out.



4. Insert 6 AAA alkaline batteries into the battery holder.



5. Insert the battery holder back into place again.



6. Insert the cover on the battery case.



#### 10.00 Error messages

<b>1. Low battery level</b> This message indicated that the voltage in the batteries is too low for the digital scale to be able to function. Replace the batteries	LobAt
<b>2. High Zero</b> The load is over the limit when the unit is switched on. Reduce the load.	00000
<b>3. Low zero</b> The load is under the limit when the unit is switched on. Increase the load.	End
<b>4. Overload or counter error</b> The load is over the permitted limit, reduce the load and try again. Contact a Guldmann service center if the problem persists.	Err
<b>5. Memory error</b> The programs in the scale contain errors. We ask that you contact a Guldmann service center if the problem persists.	{rr{

#### Maintenance and service





We recommend that regular safety/service inspections is performed at least once a year.

This check must be performed by personnel who are qualified to carry out the task. Contact your local Guldmann representative, who will be at your disposition if you need further information. In order to give the digital scale a better and longer life span it is recommended that regular cleaning be performed. Conduct regular (at least once per year) functional checks on the model RS digital scale in the following manner:

- · Checks of mechanical parts, hooks, bolts, screws, etc.
- Functionality tests of keyboard
- Check of the ABS enclosure
- · Check of the batteries
- Scale control (with respect to metrological standards DL N.517 and DM N.182).

Clean the digital scale with a soft cloth, using warm water and a mild soap solution. Avoid the use of solvents or abrasive substances. Do not use large quantities of water when cleaning the scale, since this may lead to damage to the scale's electronic parts. **Always shut the digital scale off before performing cleaning.** In the event of long-term inactivity for the digital scale: Remove the batteries from the battery compartment, and cover the digital scale in order to keep it intact. Do not subject the digital scale to shocks or excessive mechanical stress during transport. Contact your local Guldmann representative if you have a need for repairs or assistance.

The digital scale is sold type-approved with the first metrological check (sign with M). A later calibration is always necessary if one or more security seals have been damaged, or the display shows abnormal weight indications.



# In order to maintain the medical approval the digital scale MUST be calibrated/verified according to national regulatiory requirements at an accridited testing institute.

#### Storage

If the digital scale is stored for an extended period of time, make sure that those parts that can be damaged are protected from any possible dust accumulation.

#### 12.00 Disposal of digital scale including batteries



#### Disposal with respect to Directive 2012/19/EU

This product conforms to **EU Directive 2012/19/EU**. The symbol with the X over a refuse container on the device means that the product must not be mixed with household waste. It must be handled separately and must be delivered to a location that collects electrical and electronic waste or be delivered to the distributor when purchasing a new product of the same type. At the end of the product's life span, the user is responsible for delivering it to a suitable collection location. Appropriate separate collection and delivery of the product for reuse, processing and environmentally friendly disposal contributes to avoiding possible effects on the environment and human health and promotes reuse of those materials that the product was made from.

Contact your local collection location or V. Guldmann A/S, where the product was purchased, if you desire further information on available possible collection systems.

As a consumer, you are obligated by law to deliver used or discharged batteries. Old batteries can be delivered to public collection locations or bring them to any distributor of batteries, who has containers set up for collection. In the event electrical and electronic devices are discarded, the batteries must also be taken out and delivered to the proper containers for collection.

Note:: The following symbols indicate the presence of toxic substances.

- **Pb** = batteries that contain lead
- Cd = batteries that contain cadmium
- Hg = batteries that contain mercury



Do not place electrical components and batteries in with household waste. Batteries must always be delivered to an approved collection location for recycling.

#### 13.00 Identification labels

On the affixed metrological label, the year of production is specified, for example16=2016.17=2017...etc.



**CE** 0476 Units in class Im with measurement function with respect to Directive 93/42/EEC

#### Repetition of metrological verification

The digital scale is sold type-approved with the first metrological verification (sign with M). We recommend that the maintenance be performed by qualified personnel.



In order to maintain the medical approval the digital scale must be calibrated/verified according to national regulatiory requirements at an accridited testing institute. Contact your distributor for further information.

#### 14.00 Warranty and service conditions

#### A. Warranty

Guldmann warrants its equipment is free from material defects under normal use, and will perform substantially in accordance with the specifications set forth in documentation provided with the equipment.

This express warranty shall be in effect for one year from the date of original purchase and installation (the "Warranty Period"). If a valid claim is made during the Warranty Period for malfunction or equipment defect, Guldmann will repair or replace the equipment at no additional cost to you. Guldmann retains sole discretion as to whether the equipment will be repaired or replaced.

The warranty does not cover any part of the equipment that has been subject to damage or abuse by the user or others. The warranty does not cover any part of the equipment that has been altered or changed in any way by the user or others. Guldmann does not warrant that the lifting device functions will meet your requirements, be uninterrupted or error free.

The warranty set forth is in lieu of all other express and implied warranties, whether oral, written or implied, and the remedies set forth above are your sole and exclusive remedies. Only an authorized officer of Guldmann may make modifications to this warranty, or additional warranties binding on Guldmann. Accordingly, additional statements such as advertising or presentations, whether oral or written, do not constitute warranties by Guldmann.

This warranty shall be null and void if the equipment is operated and maintained in any manner inconsistent with its intended use or the instructions provided with the product. Further, in order for the warranty to remain in effect for the full Warranty Period, all service to the equipment must be provided by a Guldmann certified technician. Any parts or components repaired or replaced by a Guldmann certified technician will be guaranteed for the remainder of the Warranty Period.

#### Only for USA

This warranty shall be null and void if the equipment is operated and maintained in any manner inconsistent with its intended use or the instructions provided with the product. Further, in order for the warranty to remain in effect for the full Warranty Period, all service to the equipment must be provided by a Guldmann Certified Technician. A Guldmann Certified Technician is a technician who has successfully completed Guldmann Service Training, and who holds a valid Service Training Certificate from Guldmann, and is in possession of a valid password to access Guldmann's Service and Information Console (SIC). A Guldmann Service Training Certificate and SIC password are valid for three years (only USA) from the date the technician is first certified. Thereafter, the technician must undergo re-certification training to obtain a new valid certificate and password. Any parts or components repaired or replaced by a Guldmann Certified Technician will be guaranteed for the remainder of the Warranty Period. In the event the warranty is rendered null and void, the purchaser shall indemnify and hold Guldmann harmless of and from any and all claims or liability arising as a result of equipment malfunction or misuse.

#### B. Service or Repair

Contact Guldmann Repair for an authorization to return any defective item during the Warranty Period. You will be provided with a return authorization number and address for returning the item for warranty service or replacement. Do not return items to Guldmann under warranty without receiving a Return Authorization Number.

If mailing the item, pack it carefully in a sturdy carton to prevent damage. Include your Return Authorization Number, a brief description of the problem and your return address and phone number. Guldmann does not assume the risk of loss or damage while in transit, so it is recommended you insure the package.

## Time to care

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