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SHIFTING THE LIMITS

## F series Robacta-USC-X



Operating instructions  
F series

EN





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Ultraschalltechnik & Oberflächenveredelung

# Operating instructions

## Ultrasonic tray F series



•English•



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# 1

## General

These operating instructions are supplied as standard with the unit. They should be kept within easy reach and remain with the unit if it is sold.

We reserve the right to amend the information in these operating instructions to take account of technical developments.

# 2

## Before starting for the first time

## Important safety notices

Read these operating instructions thoroughly before using, and use this electrical device only as described in the instructions.

This manual must be accessible to the operator at all times.

The safety rules applicable in your country must be followed in addition to the instructions in this manual.

### Disclaimer

The manufacturer accepts no liability for any injury to people or damage to the unit or items to be cleaned caused by improper use contrary to these operating instructions.

The owner is responsible for instructing the operators.

# 2.1

## Notes on using this manual

### Symbols used in this manual



This symbol warns of the risk of injury by electricity.



This symbol warns of the risk of injury by explosion and/or deflagration.



This symbol warns of injury by hot surfaces and liquids.



This symbol warns of minor injury and damage to equipment/property.



This indicates supplementary information.

### Signal words in this manual

#### Danger

The signal word "Danger" warns of severe injuries with a risk of fatal injury.

#### Warning

The signal word "Warning" warns of severe injuries and damage to the unit and equipment.

#### Caution

The signal word "Caution" warns of minor injuries or damage.

#### Attention

The signal word "Attention" warns of damage to equipment/property.

# 2.2

## Safety instructions on using the unit

### Proper use

This ultrasonic cleaning unit is intended solely for treating **objects** immersed in cleaning fluids with ultrasound.

It is not intended for use in areas with explosive atmospheres caused in any other manner.

### User

The unit must only be operated by trained personnel who must follow these operating instructions.

<b>Checking for damage</b>	Check the unit and mains cable for damage in transit. Do not start up if you identify any damage.
<b>Mains connection</b>	For safety reasons, only connect the unit to a socket that is correctly earthed. The technical details on the rating plate must be compatible with the local conditions for connection, particularly mains voltage and connected load.
<b>Set-up</b>	The unit must be set up in a dry location with sufficient ventilation to ensure the removal of cleaning fluid vapours. Keep the set-up area, housing and controls dry. Protect against the ingress of moisture. Do not cover ventilation slots.
<b>Avoiding electrical accidents</b>	Always remove the mains plug when filling, maintaining and servicing the unit, if water in the unit is suspected, in the event of a fault and after use. The unit must only be opened by a qualified electrician.
<b>Cleaning fluid</b>	Only water, osmosis water or deionised water may be used in this unit, otherwise there is a risk of fire and explosion. Combustible liquids must never be poured into the tray and used for ultrasound treatment.
<b>Hot surfaces and liquid</b>	Risk of burns and scalds. The unit surfaces, cleaning fluid, cleaning basket and items to be cleaned can become very hot, depending on how long the unit is in use.
<b>Unit must be empty when moved</b>	Do not move the unit when full - risk of tipping if it encounters an obstacle. The cleaning fluid can spill out.
<b>Noise emissions</b>	Under certain circumstances, ultrasonic devices can trigger unpleasant auditory sensations. Always wear ear defenders if you have to stand in the vicinity of an ultrasonic device that is operated without a cover. We strongly recommend that you wear ear defenders if the unit is operated at 27 kHz with the tray cover open at the same time.
<b>Sound transmission by contact</b>	During operation, do not reach into the cleaning fluid or touch parts conducting ultrasound (tray, basket, items to be cleaned, etc.).

### 3

## Process-specific notes

### 3.1

### Water quality

The quality of the water is a significant factor in the cleaning process. We distinguish between the following:

Quality	Description	Utilisation
Untreated water or mains water	Drinking water with a minimum content of minerals such as calcium, magnesium, carbonates, etc.	for general cleaning processes, very good rinsing effect, risk of staining after cleaning and limescale build-up in the unit
Softened or soft water	Mains water without calcium and magnesium ions, but with a large proportion of sodium ions	for general cleaning processes, reduced limescale build-up in the unit
Osmosis water	Softened water from which most of the salts and residual ions have been removed	for general cleaning processes, for parts with little staining after drying
Distilled water	Largely free of salts, organic substances and microorganisms. It may, however, still contain small quantities of highly volatile compounds.	for general cleaning processes, for parts with little staining after drying
Deionised water	Osmosis water, in which the residual ions have been further minimised.	for stain-free parts after drying

### 3.2

### Permitted cleaning media

- Osmosis water
- Deionised water
- Distilled water

## 4 Product description

### 4.1 Product features

- Ultrasonic tray made from special, highly cavitation-resistant stainless steel
- Housing made from V2A (EN 1.4301, ASTM/AISI 304) stainless steel
- Tray base slopes to improve drainage of the cleaning fluid
- Set values and actual values in the switch cabinet are displayed on the controller
- Level monitoring with visual display to protect against running dry

### 4.2 Function

The F series units are cleaning systems that can only be operated in conjunction with a higher-level controller. The ultrasonic cleaning and air shower are started via a communication interface, which also forwards a

Ready signal to the controller.

The unit has a settling tank that acts as a water reservoir and dirt trap. When the system is in use, the tray is filled and refilled automatically.

### 4.3 Scope of supply

- Ultrasonic cleaning unit
- Removable cover
- Operating instructions
- Settling tank

### 4.4 Optional accessories

- Additional settling tank
- Filter cover

### 4.5 Technical data

Basic data	Robacta-USC-150-XXXV
Tray filling volume	3.5 litres
Settling tank filling volume	20 litres
External dimensions W/D/H [mm]	600 / 400 / 1300
Mains connection	230 VAC +PE
Ultrasound frequency	Single: 27 kHz
Power consumption	300W
Ultrasound power	150W
Sound density [W/L]	20
Max. air consumption	3500 l/min
Degree of protection	IP 42



Weight [kg]	92		
Sound level $L_p$ [dB(A)]	< 80		
<b>Types (V)</b>	<b>115 V-T</b>	<b>230V</b>	<b>440 V-T</b>
Mains connection [VAC + PE]	115	230	440
Transformer	Yes	No	Yes
Voltage tolerance [%]	±10	±10	±10
Minimum voltage [V]	104	207	396
Maximum voltage [V]	127	253	484

#### 4.6

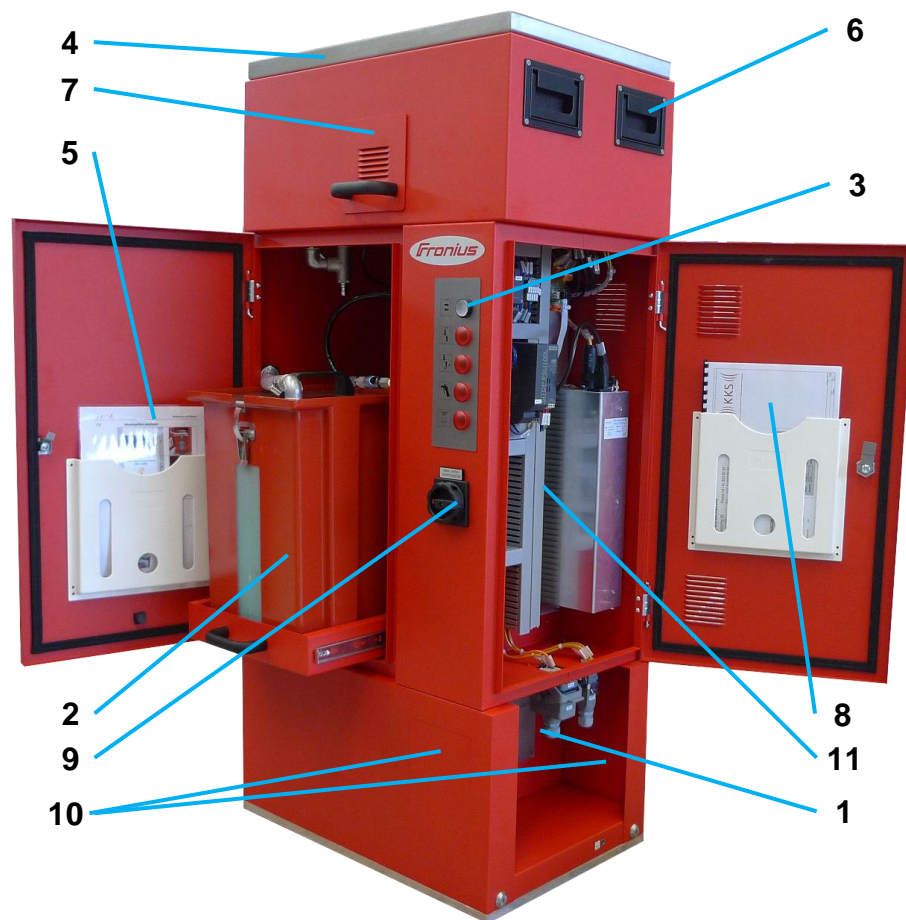
### Type code

Robacta-USC-150-230V-T

- Robacta-USC = Type
- 150 = Ultrasound power in W
- 230 V = Input voltage in VAC
- T = With transformer (optional)

#### 4.7

### Structure overview



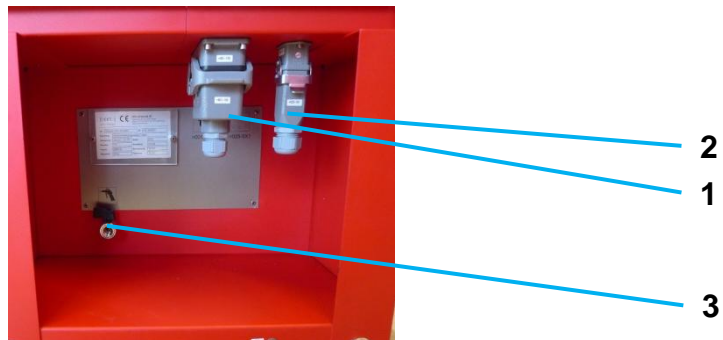
1	Incoming supply
2	Settling tank
3	Control panel

4	Ultrasonic tray
5	Instructions: Changing the settling tank
6	Handles
7	Air shower and collecting drawer
8	Circuit diagram
9	Main switch
10	Break-through panels for incoming supply from the side
11	Switch cabinet

## 4.8

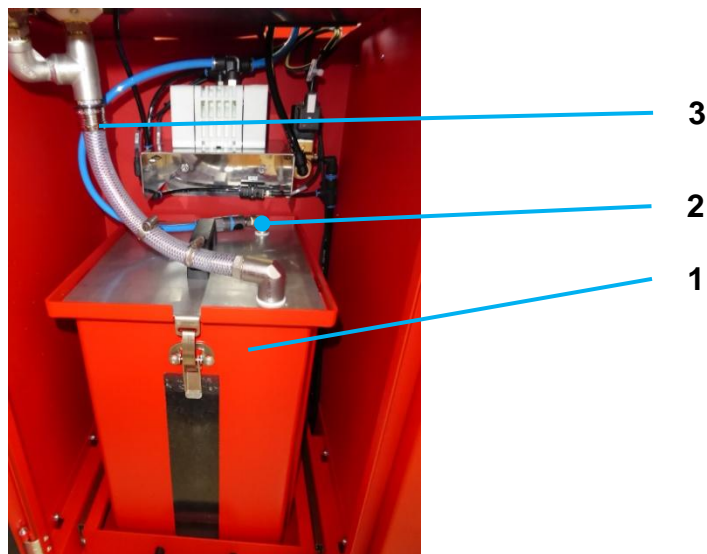
**Components**

## 4.8.1

**Incoming supply**

1	Incoming voltage as shown on rating plate	
2	Communication:	Pin 1 = Enable cleaning Pin 2 = Air shower ON Pin 3 = 0VDC Pin 4 = +24VDC continuous voltage Pin 5 = Ultrasonic cleaning OK Pin 6 = Earth
3	Incoming air supply:	G ¼, 6 bar, min. Ø 10 mm

## 4.8.2

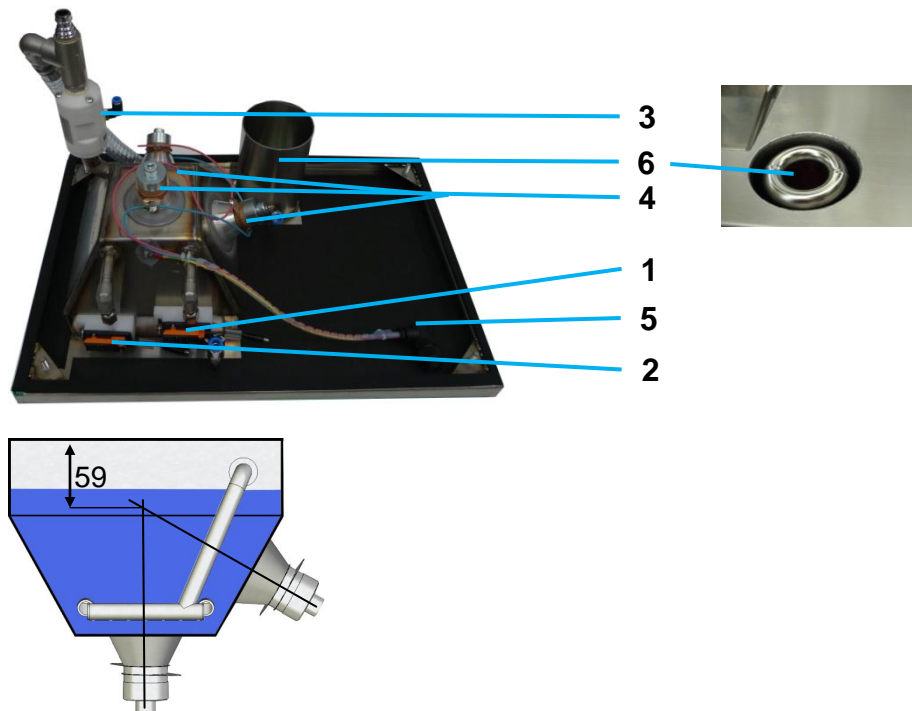
**Settling tank**

1	Settling tank with cascade
2	Quick-release coupling for suction in the settling tank

**3 Quick-release coupling for drain into settling tank**

**4.8.3**

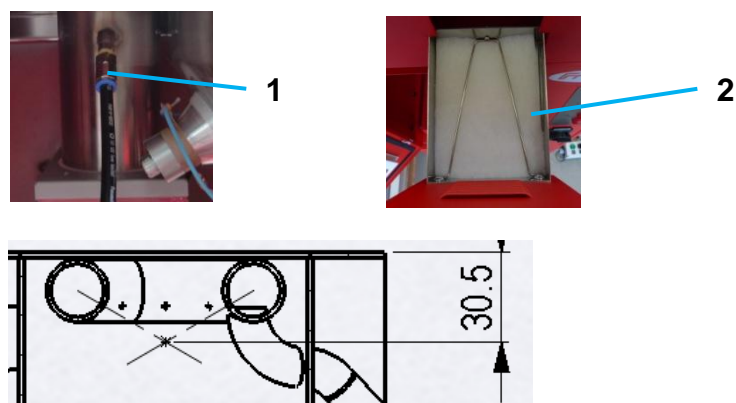
**Ultrasonic tray**



1	Tray empty level
2	Tray full level
3	Pinch valve
4	Ultrasound elements
5	Ultrasound connector
6	Blow-off station

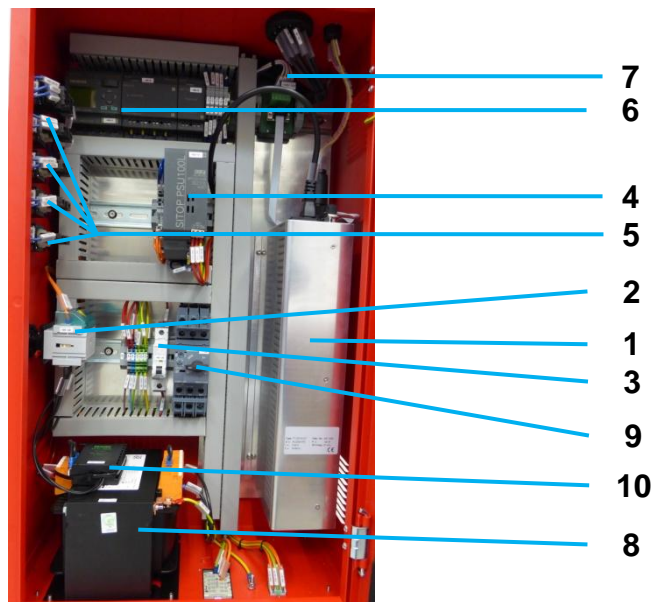
**4.8.4**

**Blow-off station**



1	Compressed air connection
2	Drawer with filter

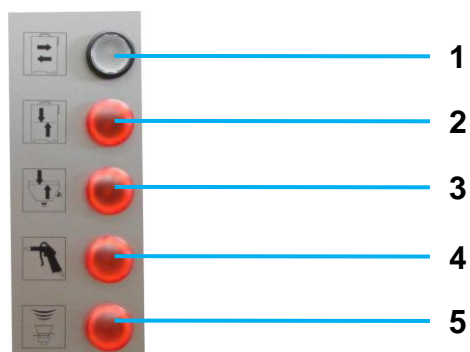
## 4.8.5

**Switch cabinet**

1	Ultrasound generator
2	Main switch
3	Fuse
4	24 V DC power supply
5	Controls
6	Controller
7	9-pin D-sub adapter
8	Transformer
9	Transformer circuit breaker
10	Overvoltage protection

Items 8 & 9 are only present on types with XXXV-T.  
Item 10 is only present on type 440 V-T.

## 4.9

**Control panel**

1	Changing the settling tank	<p>Illuminated pushbutton for changing the settling tank.</p> <p>When the button is pressed, it starts to flash. The unit opens the pinch valve and drains the tray.</p> <p>When the button lights up continuously, the process has ended. The door can now be opened and the settling tank can be changed by opening the quick-release couplings.</p> <p>After changing the settling tank and closing the quick-release couplings, press the button for &gt;3 seconds.</p> <p>The unit will then pump water back into the tray. Once the level is reached, the DEGAS process starts, and production can be started.</p> <p>The duration of the DEGAS process is set using LOGO.</p>
2	Settling tank level	The indicator lamp lights up when the level in the settling tank is too low.
3	Tray level	The indicator lamp lights up when the level in the tray is too low.
4	Compressed air fault	The indicator lamp lights up when there is no compressed air available.
5	Ultrasound fault	The indicator lamp lights up when the ultrasound generator signals a fault.

## Degas Degassing of the water in the unit

### LOGO controller

#### 4.10

##### Start screen

K	K	S	-	R	o	b	a	c	t	a	-	U	S	C
				W	e		0	5	:	4	7			
T	o	t	a	l							0	h	0	m
U	S										0	h	0	m

Display:  
Welcome screen

Use the arrow buttons (↑↓) to change the screen

##### Setting the process parameters

				P	a	s	s	w	o	r	t			
									0					
				V	1	.	0							

## 4.10.1

## Setting the time

		M	o		1	0	:	2	9						
	2	0	0	9	-	0	2	-	1	6					

Move the cursor down several times until the date appears, then press <ESC>.

	S	t	o	p											
	P	a	r	a	m	S	e	t	z	e	n				
	M	e	l	d	g	K	o	n	f	i	g				
>	E	i	n	s	t	e	l	l	u	n	g				

Move cursor down to *Einstellungen* (Settings)  
<OK>

>	U	h	r	.	.										
	L	C	D	.	.										
	M	e	n	ü	s	p	r	a	c	h	e				

## Switch to summer / winter time

Cursor on *Uhr.. (Time..)*  
<OK>

>	U	h	r	.	.										
	L	C	D	.	.										
	M	e	n	ü	s	p	r	a	c	h	e				

	U	h	r	.	.										
>	S	/	W	-	Z	e	i	t							
	S	y	n	c	h										

Move the cursor to *S/W-Zeit* (S/W time).  
<OK>

Move the cursor to *Uhr stellen* (Set time).  
<OK>

	U	h	r	.	.										
	L	C	D	.	.										
	M	e	n	ü	s	p	r	a	c	h	e				

	E	i	n												
>	A	u	s												
	S	/	W	-	Z	e	i	t							
	E	i	n	→	E	U									

Move the cursor to *Ein* (ON) or *Aus* (OFF).  
<OK>, <Esc> to exit the menu.

Set the time and date.  
<OK>, <Esc> to exit the menu.

## 5 Before using for the first time

### 5.1 Unpacking and packaging

If possible, retain the packaging for servicing purposes. Disposal must be carried out in accordance with the applicable disposal directives.

#### Checking for damage in transit

Before using for the first time, check the unit for possible damage in transit. If any damage is identified, the unit must not be started up. Contact your supplier and the carrier.

#### Set-up area

To operate the unit, place it on a solid, flat and dry surface.



Danger of electric shock caused by the ingress of liquid. Protect the unit to prevent the ingress of moisture. The inside of this unit is protected against dripping water from outside, but the set-up area and the housing should be kept dry to prevent electrical accidents and damage to the unit.

#### Ambient conditions

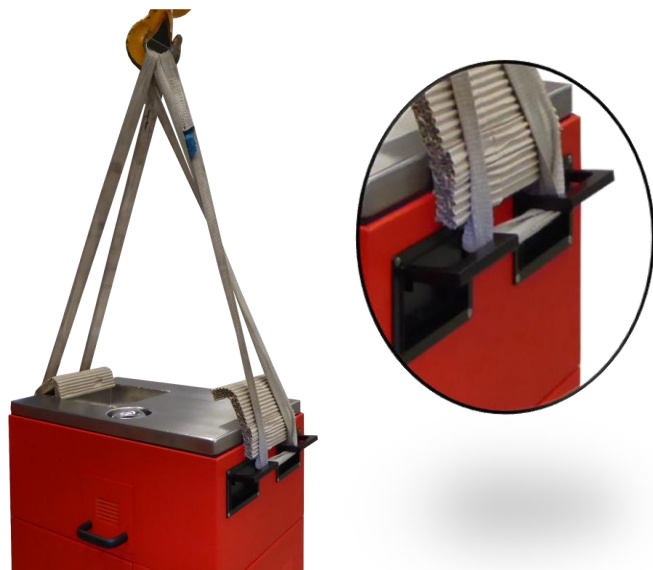
The following requirements must be met in order to operate this unit safely:

- Permitted ambient temperature during operation: +5°C to +45°C
- Permitted relative humidity during operation: max. 80%
- Permitted change in temperature between the area around the unit and the liquid in the bath: Non-dewing, i.e. no condensate forming on the unit surfaces.
- For internal operation only

### 5.2 Transport

The tray may be suspended from a crane with 2 belts, as shown below. The safe working load for each handle is at least 500 N.

**Important!** Do not transport the unit while filled.



### 5.3 Set-up

#### 1. Removing the screws

Remove the 4 screws on the side of the unit.





## 2. Detaching the base plate

Lift the unit and detach the base plate from the unit.

## 3. Fitting the base plate

The base plate must be fixed to a level, firm and vibration-free surface using 4 bolts.

**Note** Different fixings may be required to connect the installation stand to the underlying surface depending on the nature of this surface. The fixings required to connect the base plate to the surface are not supplied with the unit. The installer is responsible for selecting the right type of fixing.

## 4. Fitting the unit

Place the unit on the firmly bolted base plate and screw together with the 4 screws from step 1.

# 5.4 Installation

## 5.4.1 Electrical connection

The connection conditions must be as indicated on the rating plate. See also Technical data (*sect.4.5, p. 6*).

### Connecting the mains cable

The incoming supply line must be fused with a 30 mA RCD (Residual Current Device) and a 10 A line circuit breaker. Up to 4 units may be connected to the same RCD. RCD = Residual Current Device (FI)

## 5.4.2 Communication interface

Attach connector X1 as shown in the wiring diagram.

## 5.4.3 Connecting the compressed air

Connect a 6 bar compressed air line with an external diameter of at least 10 mm to the unit.

For the air consumption, see Technical data (*sect.4.5 (page 6)*)

## 6 Starting up / Starting for the first time

To start up successfully, every step under point 5.4 in section Installation(p.15) must be completed successfully.



### CAUTION

Do not switch the unit on unless the settling tank is correctly inserted.

### 6.1 Inserting the settling tank

The settling tank should be filled with an approved cleaning fluid (*sect.2.2, p.3 Cleaning fluid*) and then inserted in the unit. You will find information on inserting the settling tank under points 6-9 in section 7.3 Changing the settling tank (page 20).

**Checking for leaks** Check all of the unit's connections for leaks.

### 6.2 Switch on at the main switch

Turn the main switch to position 1 to switch the unit on.



### IMPORTANT! INFORMATION

If all the components are connected correctly and the main switch is switched on, the unit will start to fill the tray.

It is not necessary to press the "Change settling tank" button to fill the tray. This has the advantage that the unit will automatically fill and make itself ready for use after a power failure.

**Once the indicator lamps go out, the system is ready for cleaning.**

**Checking for leaks** Check all of the unit's connections for leaks.

7

## Operator input and operation



## CAUTION

Please note the following points before starting ultrasonic cleaning:

Danger from hot surfaces and cleaning fluid!

Ultrasound energy is physically converted into heat.

The unit and fluid heat up during ultrasonic operation.

Temperatures over 60°C can be reached in continuous operation with the cover in place.

Do not reach into the bath. Wear gloves, if necessary, to hold the unit.



## CAUTION

Under certain circumstances, ultrasonic devices can trigger unpleasant auditory sensations.

Always wear ear defenders if you have to stand in the vicinity of an ultrasonic device that is operated without a cover.



## CAUTION

After long periods, ultrasound can damage sensitive surfaces, particularly at low cleaning frequency.

Make sure you set a suitable treatment time and ultrasound output, particularly with sensitive surfaces.

If you are in any doubt, check the progress of the cleaning and condition of the material surface in good time.

**The user is responsible for checking the cleaning result and checking in good time whether the parts to be cleaned have been damaged during the cleaning process.**

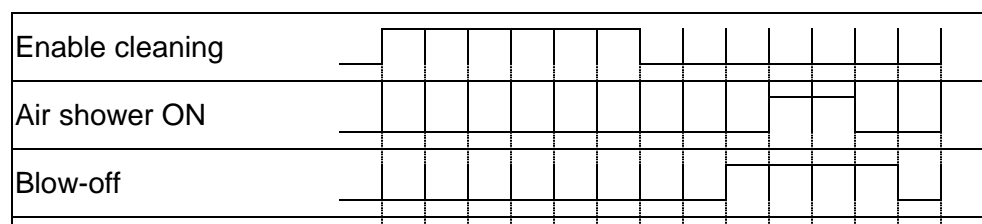
## 7.1

## Cleaning workflow

1	Ultrasound	The ultrasound is switched on and off via the interface by the higher-level controller. +24VDC = ON 0VDC = OFF
2	Ultrasonic cleaning	The robot moves the shielding gas nozzle into the tray and moves the nozzle up and down.
3	Blowing off	The robot moves the shielding gas nozzle into the blow-off station.
4	Blow-off station	The blow-off station is switched on and off via the interface by the higher-level controller. +24VDC = ON 0VDC = OFF
5	Cleaning process is complete	The protective gas nozzle is cleaned and ready for use.

## 7.2

## Flow diagram



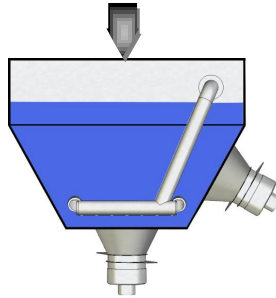
Nozzle position	0	0	1	2	3	2	1	0	4	5	5	4	4	0	
Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

### 7.2.1

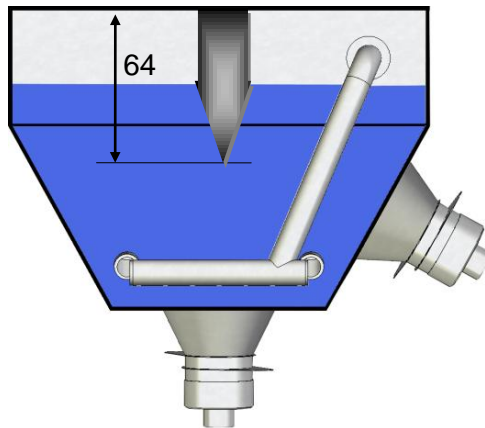
#### Positions

**Position 0** The nozzle is moving

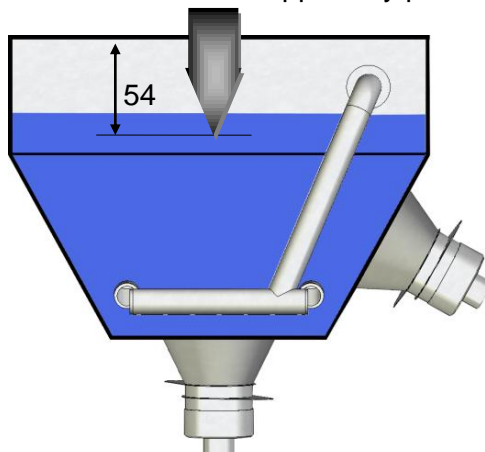
**Position 1** The nozzle is over the tray



**Position 2** The nozzle is in the lower tray position

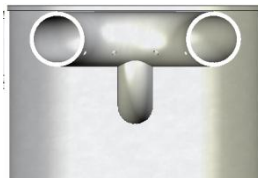


**Position 3** The nozzle is in the upper tray position

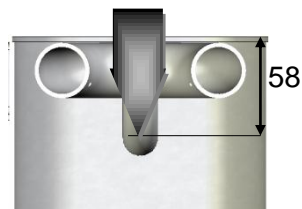


**Position 4** The nozzle is over the air shower





**Position 5** The nozzle is in the air shower



### 7.2.2

#### Speeds

Moving into the tray	100 mm/s
Movements during cleaning	5-15 mm/s
Moving into the air shower	100-200 mm/s
Moving out of the air shower	5-10 mm/s







### 7.2.3



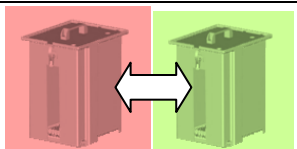
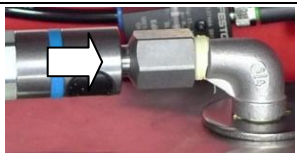
#### Process information

- Steps 4-5 should be repeated 2-3 times
- Step 6: the nozzle should be stopped for roughly 3-10 seconds

### 7.3

#### Changing the settling tank

1		8	
2	Wait until the lamp lights up continuously 	9	
3		10	 The lamp goes out.

4		11	Done
5	 Press 2x		
6			
7	 Click 2x		

## 8

## 8.1

## Maintenance

### Maintenance schedule

**NOTE**

The maintenance schedule is for guidance only; the necessary intervals should be specified on the basis of internal guidelines and the relevant working conditions.

Work	Week	Month	Year
<b>Process tray</b> Check for residues and clean.		2 x	
<b>Settling tank</b> Drain completely, clean and refill.		2 x	
<b>Blow-off drawer</b> Clean		2 x	
<b>Generator fan</b> Clean			2 x
<b>Ultrasonic tray</b> Check for any serious cavitation damage.			2 x
<b>General condition</b> Check			2 x
<b>Leaks</b> Check screw fittings, pipe system, trays, etc. ▪ Visual check		1 x	
<b>Pneumatic installation</b> Check the entire installation for leaks.			4 x
<b>Controls and displays</b> Check condition and functions (displays, pushbuttons, indicator lamps, etc.)			2 x
<b>Switch cabinet</b> Check condition and all wiring (strain relief, insulation, etc.)			2 x
<b>Level switches</b> (protection against running dry, tray level). Check sensors.			2 x
<b>Cables and cable guides</b> Check for damage		1 x	
<b>Visual check</b>	1 x		
<b>PLC controller</b> Record programs, parameters, timers and passwords	Whenever something is changed and after long stoppages		

## 8.2

### Maintenance and care

**CAUTION**
**Electrical safety**

**Always switch off at the main switch before any maintenance or care work.**

For reasons of electrical safety, the housing and mains cable should be regularly checked for damage.

**Checking the ultrasonic tray for leaks**

If any leaks are identified in the ultrasonic tray, e.g. if

- unexplained cleaning fluid residues / stains are identified beneath or on the side of the unit,



immediately inform the dealer or manufacturer of the unit of the leak and the cleaning fluid used. The unit must be returned for inspection and repair, if necessary.

#### Care of the housing

Cleaning fluid residues can be wiped off with a damp cloth depending on the type of soiling.

Regularly check the ventilation slots for obstructions. Use a vacuum cleaner from the outside to clean.

#### Cleaning the blow-off drawer

Empty and clean with a vacuum cleaner to remove all traces of residues.

### 8.3

#### Service life of the ultrasonic tray



The ultrasonic tray, particularly the surfaces that radiate sound, is generally regarded as a wearing part. The changes to these surfaces that occur over the course of time initially take the form of perceptible grey patches of increased roughness, and then subsequently take the form of abraded material, known as cavitation erosion. A special, highly cavitation-resistant stainless steel is used to delay these signs of wear for as long as possible.

Please note the following points in order to extend the service life:

- Regularly remove cleaning residues, particularly metal particles and rust bloom, using a method that will not damage the surface (wiping, rinsing, etc.).
- Abrasive particles of treated soiling (e.g. polishing pastes) should be regularly removed from the cleaning tray (e.g. when the cleaning fluid is changed).
- Always replace the cleaning fluid in good time.

### 8.4

#### Repairs and returns

##### Repair and maintenance work

Maintenance and repair work is carried out by Fronius.

**The unit must only be opened by authorised trained electricians.**

Repair and maintenance work that requires the unit to be connected and opened must only be carried out by authorised trained electricians.



**DANGER**

##### **Danger of electric shock from live parts in the unit.**

Always remove the mains plug before opening the unit. The manufacturer shall accept no liability for damage caused by unauthorised intervention in the unit.

Always use manufacturer's genuine spare parts.

If the unit fails, please contact the supplier or manufacturer.

If it has to be returned for repair, please send an accurate description of the fault with the unit. If there is damage to the tray, e.g. erosion or leak, details of the cleaning agent and substances that were cleaned will be needed in order to process the claim.

## 8.5

**Faults**

The following unit faults are indicated by indicator lamps on the control panel: The ultrasound will be switched off if any of these faults occur.

No.	Problem	Check
1	The < <i>Settling tank level</i> > lamp lights up	<ul style="list-style-type: none"> <li>• Is there a settling tank inserted?</li> <li>• Is there sufficient fluid in the settling tank?</li> <li>• Is the drawer of the settling tank fully closed?</li> </ul>
2	The < <i>Tray level</i> > lamp lights up	<ul style="list-style-type: none"> <li>• If the &lt; <i>Settling tank level</i> &gt; lamp lights up (see 1)</li> <li>• If the &lt; <i>Compressed air fault</i> &gt; lamp lights up (see 3)</li> <li>• Is the air pump working correctly?</li> <li>• Is the pinch valve closed?</li> <li>• Is the tray fill level sufficient? -&gt; Level fault</li> </ul>
3	The < <i>Compressed air fault</i> > lamp lights up	<ul style="list-style-type: none"> <li>• Is the compressed air connected and available?</li> </ul>
4	The < <i>Ultrasound fault</i> > lamp lights up	<ul style="list-style-type: none"> <li>• If the &lt; <i>Settling tank level</i> &gt; lamp lights up (see 1)</li> <li>• If the &lt; <i>Tray level</i> &gt; lamp lights up (see 2)</li> <li>• Was the ultrasound audibly perceptible? -&gt; Lamp fault</li> </ul>

## 9

**Decommissioning and disposal**

The unit components may be sent for recycling of the electronic parts and metals they contain. The manufacturer will also accept old components for disposal.

## 10

## Contact

### 10.1

### Fronius International GmbH

Please contact the Service and Support department if you have any questions or need any information. For faults and to order spare parts, please specify the serial number (on the rating plate).

Fronius dealerships near you.

[www.fronius.com](http://www.fronius.com)

### 10.2

### Manufacturer's address

KKS Ultraschall AG  
Ultrasound technology and surface finishing  
Frauholzring 29  
CH-6422 Steinen

Tel. 041 / 833 87 87  
Fax 041 / 832 25 50  
[info@kks-ultraschall.ch](mailto:info@kks-ultraschall.ch)  
[www.kks-ultraschall.ch](http://www.kks-ultraschall.ch)

# 11

## 11.1

### Spare parts

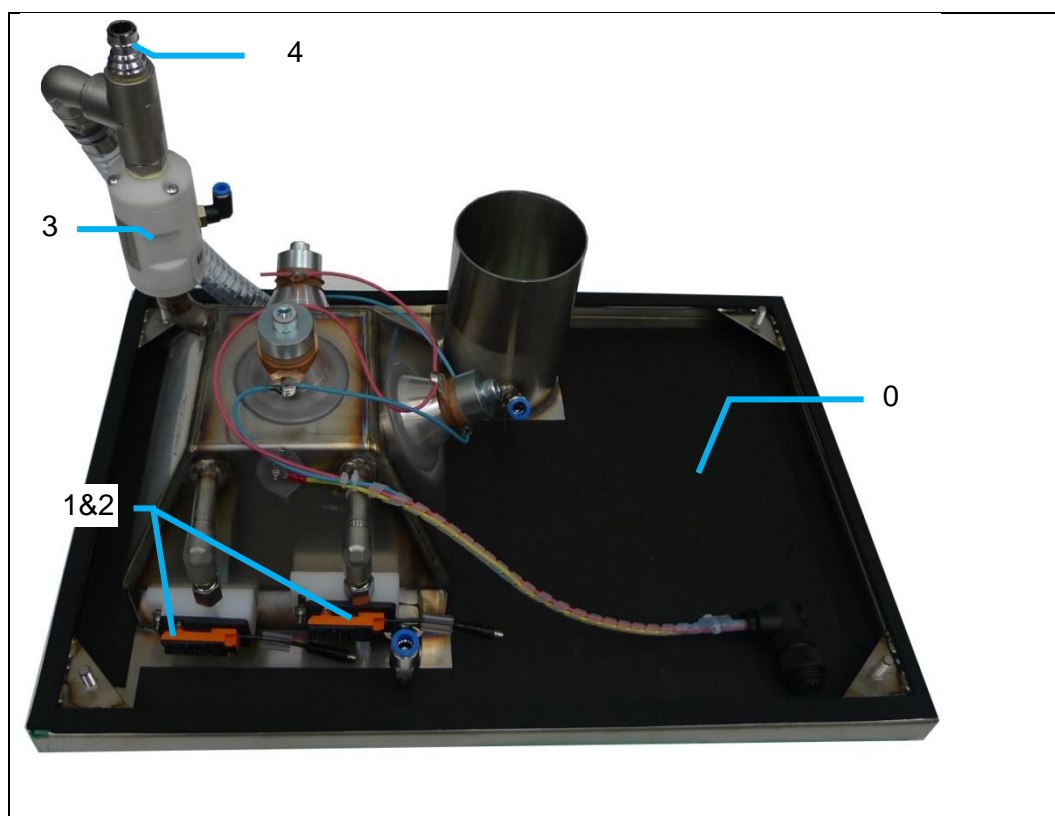
#### Housing



KKS item no.:		Designation
1	103366	Main switch 16A 3L black
2	121680	Sash lock with knurled head and cylinder lock VW E1 black, driver H22 L35
3	121684	Sash lock with knurled head without cylinder lock, driver H22 L35
4	102250	Side fold-down carrying handles

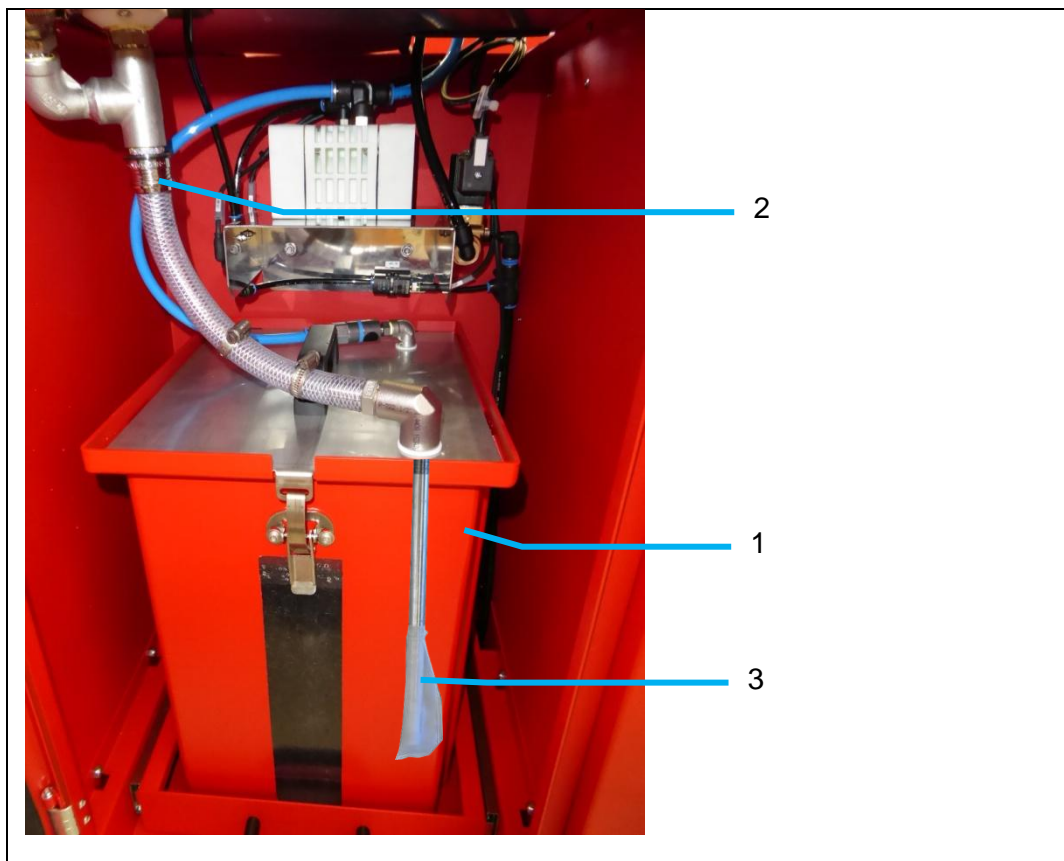
## 11.2

### Tray insert



	KKS item no.	Designation
0	120700	Robacta-USC tray insert, complete
1	121892	Robacta-USC tray level; set
2	114196	Assembly adapter, level sensor KQ
3	100167	Pinch valve, POM/NRLH, 1/2Z
4	121433	NEOMATIC push-on nipple with external thread, type 5964; AG G 1/2

## 11.3

**Settling tank**

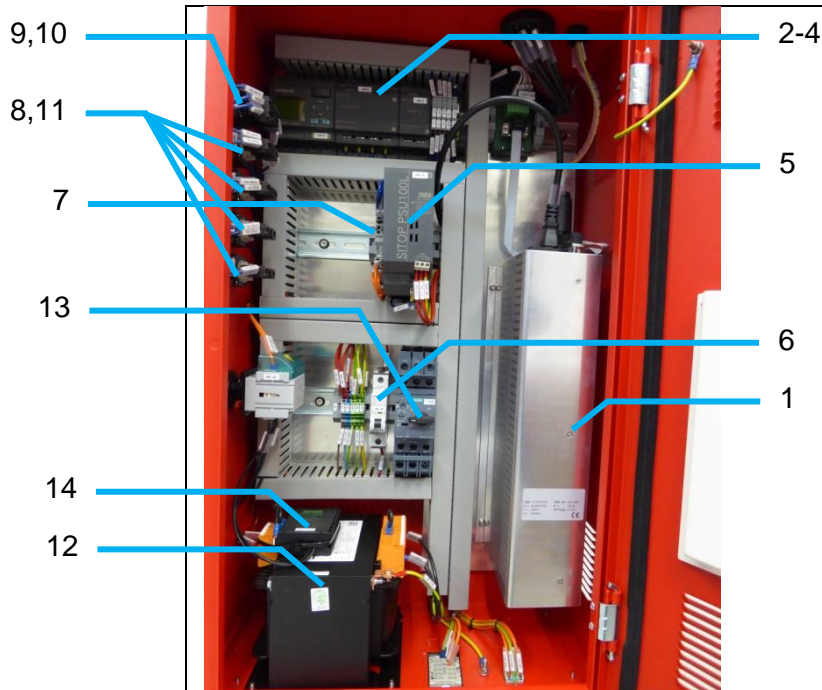
KKS item no.		Designation
0	120701	Robacta-USC settling tank, intake & drain, complete
1	120708	Robacta-USC storage tank, empty
2	121464	NEOMATIC coupling with hose nozzle, type 5953; for hose ID 16
3	107102	Filter bag / flat bag, IØ=25 mm L=160 mm +/- 3 mm, open at top

## 11.3.1

**Settling tank level**

KKS item no.		Designation
1	121890	Robacta-USC settling tank level; set

## 11.4 Control cabinet



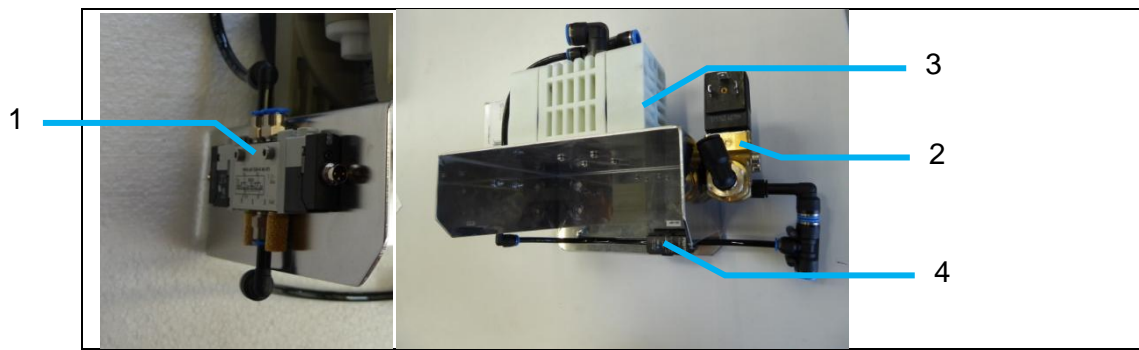
	KKS item no.	Designation
1	121946	FT150TM-R 27kHz remote F series, including mounting plate
2	122518	Logo! 12/24 RC 8Di 4Do relay 10A 0BA8
3	123172	Logo! DM16 24 8Di 8DO transistor 0.3A 0BA2
4	123146	Logo! AM2 AQ 2AO 0-10V 0-20mA 0BA2
5	120680	Power supply unit 120/230VAC 24VDC 5A
6	120696	Line circuit breaker, 1P 3A Characteristic C
7	121093	Optocoupler, input 24VDC output 9-60VDC 100 mA
8	103361	Lamp holder with LED 24VDC red
9	103362	Lamp holder with LED 24VDC white
10	102275	Illuminated pushbutton, transparent
11	102277	Indicator light, red without LED
12	120952	MST isolating transformer, P: 800VA, In: 105-550VAC, Out: 2*115(230VAC) {only present on types with XXXV-T.}
13	120683	Transformer circuit breaker 1.8-2.5A {for type 440 V-T only}
13	122025	Transformer circuit breaker 5.5-8.0A {for type 115 V-T only}
14	122741	Transformer overvoltage protection {for type 440 V-T only}

**Please note:!** The following items have been replaced with newer versions:  
103429 has been replaced by 122518  
120691 has been replaced by 123172  
103433 has been replaced by 123146

The devices with the serial numbers: FXXXXXX0000-FXXXXXX0011 bear the logo: 0BA6, which is no longer used by the supplier. These components are no longer available in all quantities. Individual components can be found, but at a significantly higher price point. It is possible to convert the older models to the new control system. However, only if all three controllers are replaced. The connections are entirely identical.



## 11.5

**Pneumatic module**

	KKS item no.	Designation
0	<b>121496</b>	<b>Robacta-USC pneumatic unit</b>
1	121494	Solenoid valve, VUVG-L10-T32H-AT-Q6-1R8L
2	120671	2/2-way solenoid valve, MS/PTFE, 24VDC, NPT 1/2" bushing UL
3	121956	Compressed air diaphragm pump, PP, Santoprene + PTFE 5 l/min
4	100203	Pressure switch, 0-10 bar, plug-in connection D6, M8 3-pin plug



Notes	Remarks
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[illegible]

## 12.2 Process parameters

Description of the parts	Cleaning agent	Concentration	Temperature	Time

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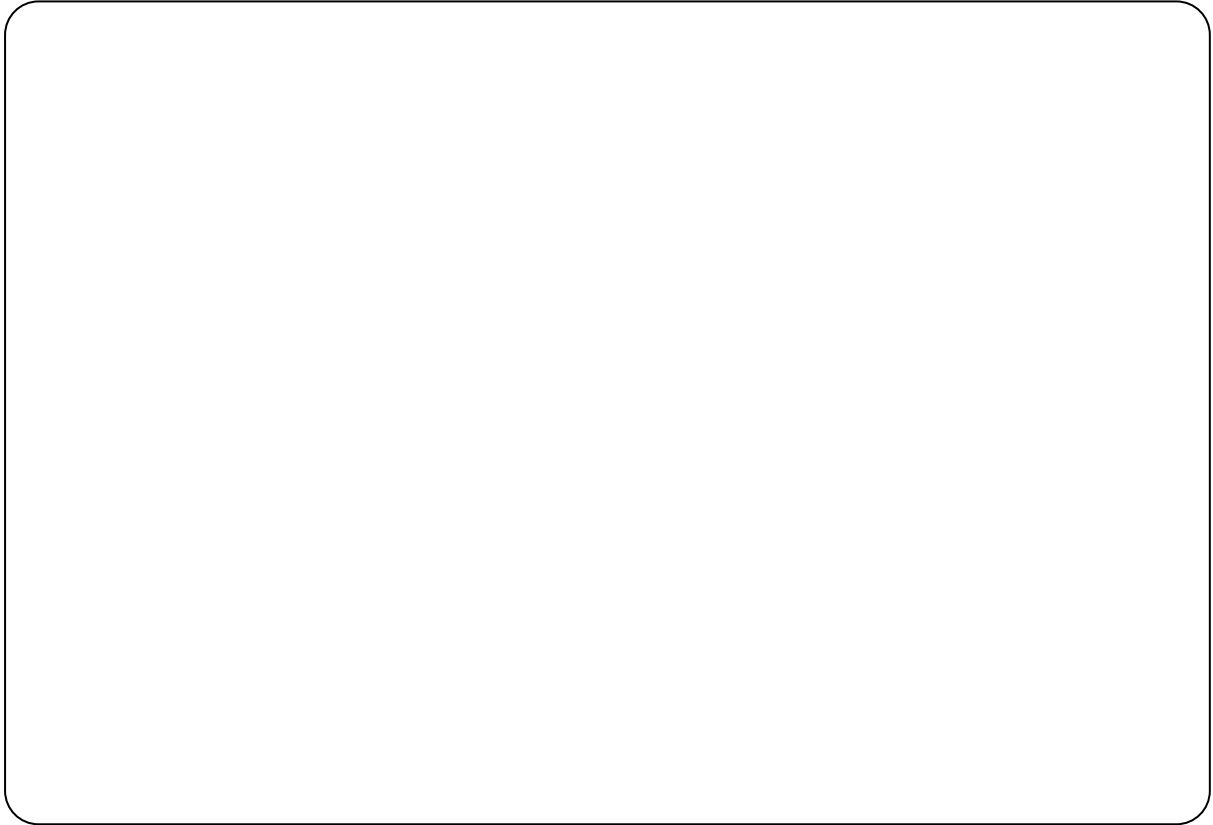
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## 14

**Declaration of conformity**

We, as the manufacturers of the machine, declare that the machine designated below conforms to the directives and standards listed below.



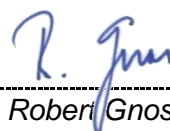
<b>Directives</b>	
<b>2006/42/EG</b>	Machinery Directive
<b>2014/30/EU</b>	Electromagnetic Compatibility Directive
<b>2014/35/EU</b>	Low-Voltage Directive

<b>Standards</b>	
<b>EN ISO 12100:2010</b>	Safety of machinery - General principles for design - Risk assessment and risk reduction
<b>EN 60204-1:2006</b>	Safety of machinery - Electrical equipment of machines - Part 1: General requirements

This declaration shall cease to be valid if the product is modified in any way without our agreement.

Signed in Steinen,  
27.02.2018

Place/date:



Robert Gnoss, CEO



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of our sales & service partners and locations