

The network of specialists, for **AM professionals**

# INTEGR<sup>AM</sup>

Eco SONIC  
Cleaning





System type EcoSONIC	Nom. cap. bowl dm <sup>3</sup>	Number of sonotrodes	Freq. Khz	Overall sizes max.: WxDxH mm.	Ultrasonic Generator
EcoSONIC-25-ECS-1	25	1	20	1500x700x1800	Titako Top Mini Single 400W 230 VAC 1PH
EcoSONIC-50-ECS-1	50	1	20	4000x2400x2400	Titako Top Mini Single 400W 230 VAC 1PH
EcoSONIC-120-ECS-1	120	1	20	4450x2650x2400	Titako Top Mini Single 400W 230 VAC 1PH
EcoSONIC-120-ECS-2	120	2	20	4450x2650x2400	Titako Top Mini Double 400Wx2 - 230 VAC 1PH

Indicative measurements – subject to modification; Final extension «-D» complete with drying option «Dry»  
 All sonotrodes fitted as standard are: TITANIUM BOOSTER/ROD GETWAVE 20 KHZ Ø52 H223mm

EcoSONIC-120-ECS-2-DSS

Dry Saturated Steam version, with SurfPRO phases and PRE-WASH supported by dry saturated steam

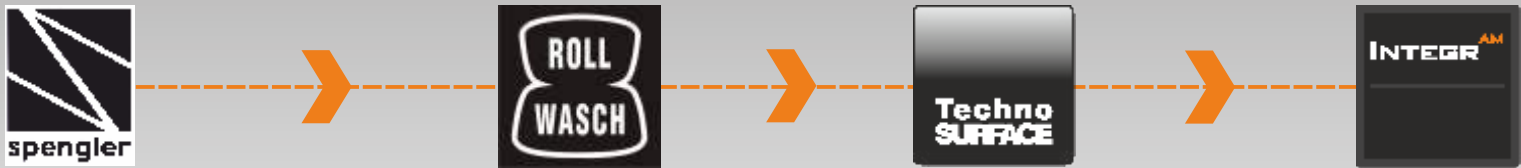
# ECOSONIC ECS ONE RANGE OF 4 STANDARD MODELS WITH 3 CYCLE PHASES

**WASHING**

**RINSING**

**DRYING**

All ECOSONIC ECS systems offered by Rollwasch can work on component loads combined with special QF finishing vectorial "media" that allow three-dimensional movement within the working bowl. The use of QF "media" is particularly useful in all cases where the components are particularly delicate or cannot be processed in "piece by piece" mode. Thanks to a carefully designed software, the automatic washing processes can be carried out using previously programmed recipes, according to specific needs - the parameters that can be managed are therefore, for each phase (optional "-D" drying): ultrasonic frequencies, vibratory frequencies tank, A / R tank vibratory sense, times mode (Stop & Go or continuous), times / intervals, temperatures, and more;



The IntegrAM program was born from a network of specialists, for AM professionals:  
<https://integram.eu/en/who-we-are/>



Eco SONIC



ECOSONIC technology is the demonstration of how multi-disciplinary Rollwasch® vision is able to be. A vision that has combined in this important project the best available resources at European level.

First of all, ECOSONIC technology permits to accomplish complete systems of washing, rinsing and drying, in automatic and with investments on average more moderate than classic automatic systems available on the market. This result is due to the particular multitasking operating dynamic enabled by the combination of several factors as follows:

1. A circular vibrofinishing tank imposes to pieces that has to be washed a three-dimensional motion conveyed by special vectorial «media» called QF, with elastic and damping action – this thanks to a 1500 rpm motor-vibrator commanded by inverter;
2. A titanium sonotrode – conveniently placed few millimetres up the «media/pieces» mass and some centimetres down water level – produces an ultrasonic frequency equal to 20 KHz (twenty thousand times / second) and this engenders cavitation and deep cleaning in the involved components;
3. A hydraulic system made of tanks, pumps, filters and pneumatic discharging valves allows process liquids to effect separate and thermo-controlled washing and rinsing cycle phases, while a hot air insufflation system permits the final «dripping out» and drying phases of the washed parts.

In the ECOSONIC basic range are available machines with capacity of 25, 50 and 120 litres.

The constructive variables envisage for all machines the washing and rinsing phases, with the option to add the drying phase too.

About power, every machine can be equipped with a sonotrode and relevant Titako 3® generator, but it can be expanded till two or three sonotrodes with bi or tri-valent generators. New ultrasonic generators Titako 3® - more and more powerful and technologically evolved, developed to control and maximize transducers efficiency - meet the utmost expectations in all applications where quality, reliability and precision are fundamental.

ROLLWASCH® has chosen the maximum quality of components and the utmost construction precision combining high level specialists such as:

UNITECH Srl – specialised in research, development and production of solutions in ultrasonic technologies sector.

TECHNO SURFACE Sas – company whose Mission is the Research & Development and that has registered international patents in the surface treatment fields, such as the one related to EcoSonic technology.

This technological team has given birth to an interesting technology considering the high degree of automation and competitiveness offered.

EcoSonic, the first step for the ultrasonic washing of your components!

# ECOSONIC ECS I-4.0 READY SYSTEMS TO REACH THE HIGHEST STANDARDS

**WASHING**

**RINSING**

**DRYING**

**Eco SONIC**

All ECOSONIC ECS systems offered by Rollwasch® can also be set up for compatibility with Industry 4.0 requirements;

IN this case, the set-up can be customized and in any case completed with sensors, logs and specific connectivity.

Maximum operational flexibility for high quality results.

In the coming pages we present the basic 25 dm<sup>3</sup> version, ideal for smaller volume productions or for very small components. Then we are going to look at the extreme opposite, with capacity and operational options at the top of the category.

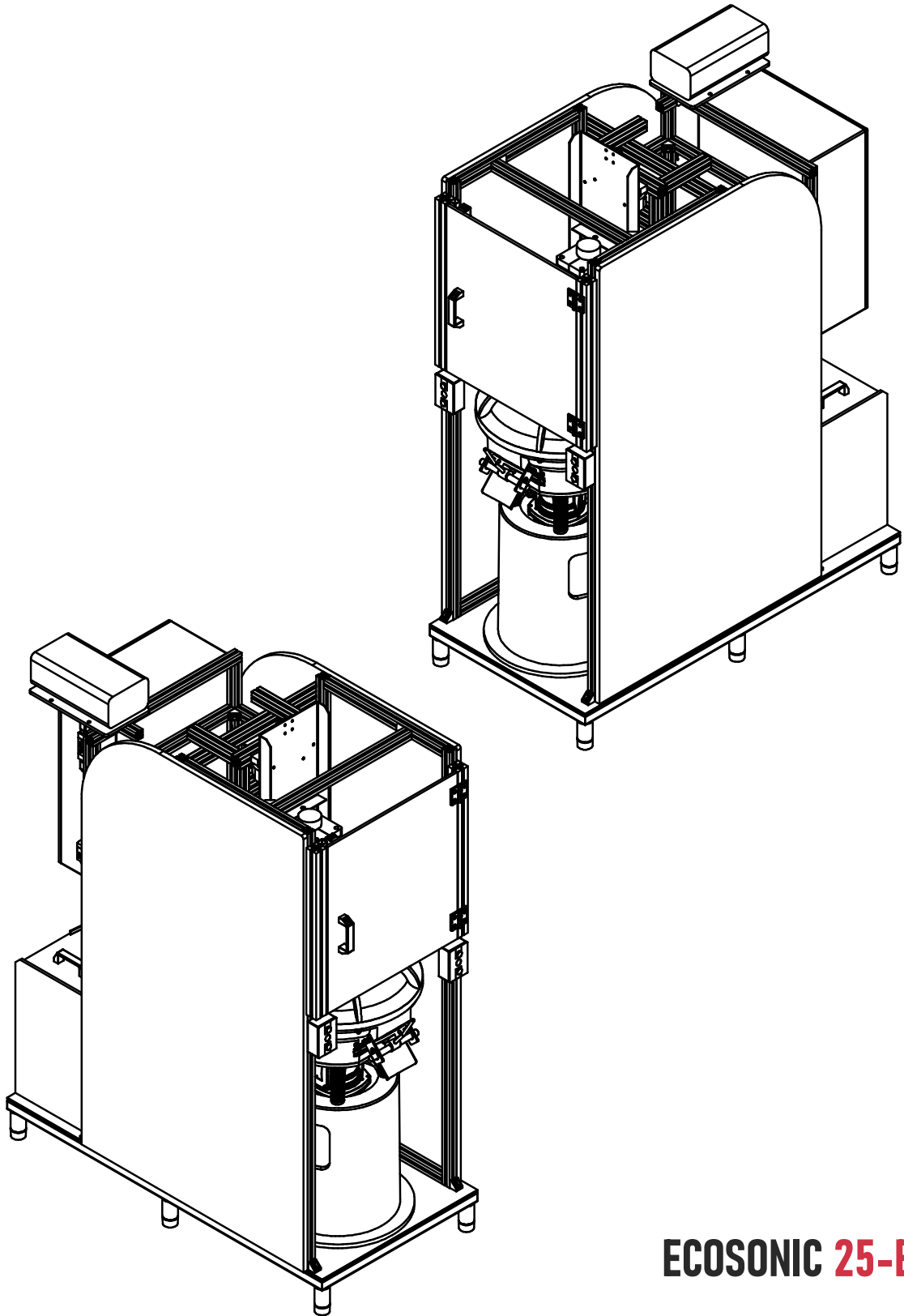


**Eco SONIC**

All ECOSONIC ECS systems offered by Rollwasch<sup>®</sup> can be modulated in the ultrasonic power used in the various cycle phases, ranging from modest percentages up to 100% of applied power.

All ECOSONIC ECS systems offered by Rollwasch can be considered "plug & play" as they are pre-assembled and pre-configured in the FAT (Factory Acceptance Test) phase. Once positioned in the destination site, it is only necessary to connect them (electricity, water and compressed air).

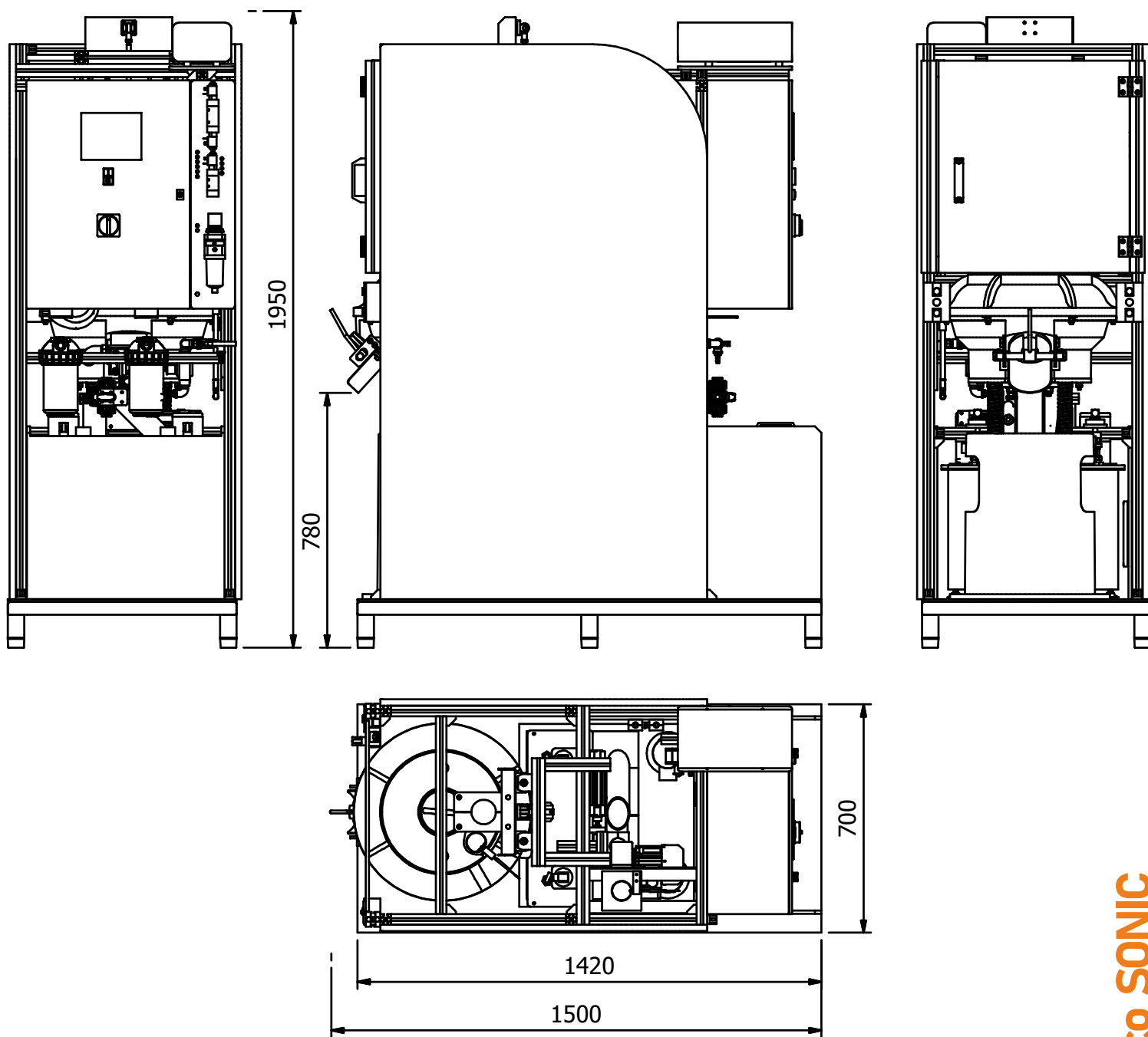
The testing service of the Rollwasch laboratory is also available to carry out demonstration tests on the components, so as to highlight all the process variables, type of media, cycle times, temperatures, washing chemical compound, etc.



## ECOSONIC 25-ECS-1 **Eco SONIC**

All ECOSONIC ECS systems of small sizes like 25-ECS-1 are suitable for those who are looking for a washing solution that takes up a minimal space.





**ECOSONIC 25-ECS-1** **EcoSONIC**

Indeed, thanks to the separate heated washing and rinsing tanks, to the pumps system and the intelligence of the control software, the small 25-litre machine is able to perform important daily tasks, carrying out a fair series of work cycles with outstanding efficiency.

**ECOSONIC 25-ECS-1****Eco SONIC**

This image highlights the soundproofing work aimed to contain the ultrasonic waves emitted by the machine during the working cycle.



## ECOSONIC 25-ECS-1

Eco SONIC

The small EcoSONIC ECS-25-1 system occupies a very reduced area, considering that it is a completely automatic system – in addition to that, there is the possibility of using «QF» elastic and vectorial media for the 3D movement of the components to be washed, useful to minimize the risk of shock. The machines of the EcoSONIC series can be customized with logo and colours of the contractual distributor – in this case the «UNITECH» customization.

AUTOMATICO  
OFFSCARICO  
OFF

RESET

L'ACQUA DI  
LAVAGGIO  
NON E' IN  
TEMPERATURA

MANUALE

L'ACQUA DI  
RISCIACQUO  
NON E' IN  
TEMPERATURA

PARAMETRI

# ECOSONIC ECS

## DUAL-FREQUENCY

### AN ADDED VALUE

## WITH SURF-PRO

RICETTE

ALLARMI

Totale tempo  
rimanente

Totale tempo  
rimanente

**SURF-PRO****PRE-WASH****RELAUNCH****WASHING****RINSING****DRYING****Eco SONIC**

Only the ECOSONIC ECS systems offered by Rollwasch® with DUAL-FREQUENCY and dedicated recycling tank have a hedge over any classic washing system.

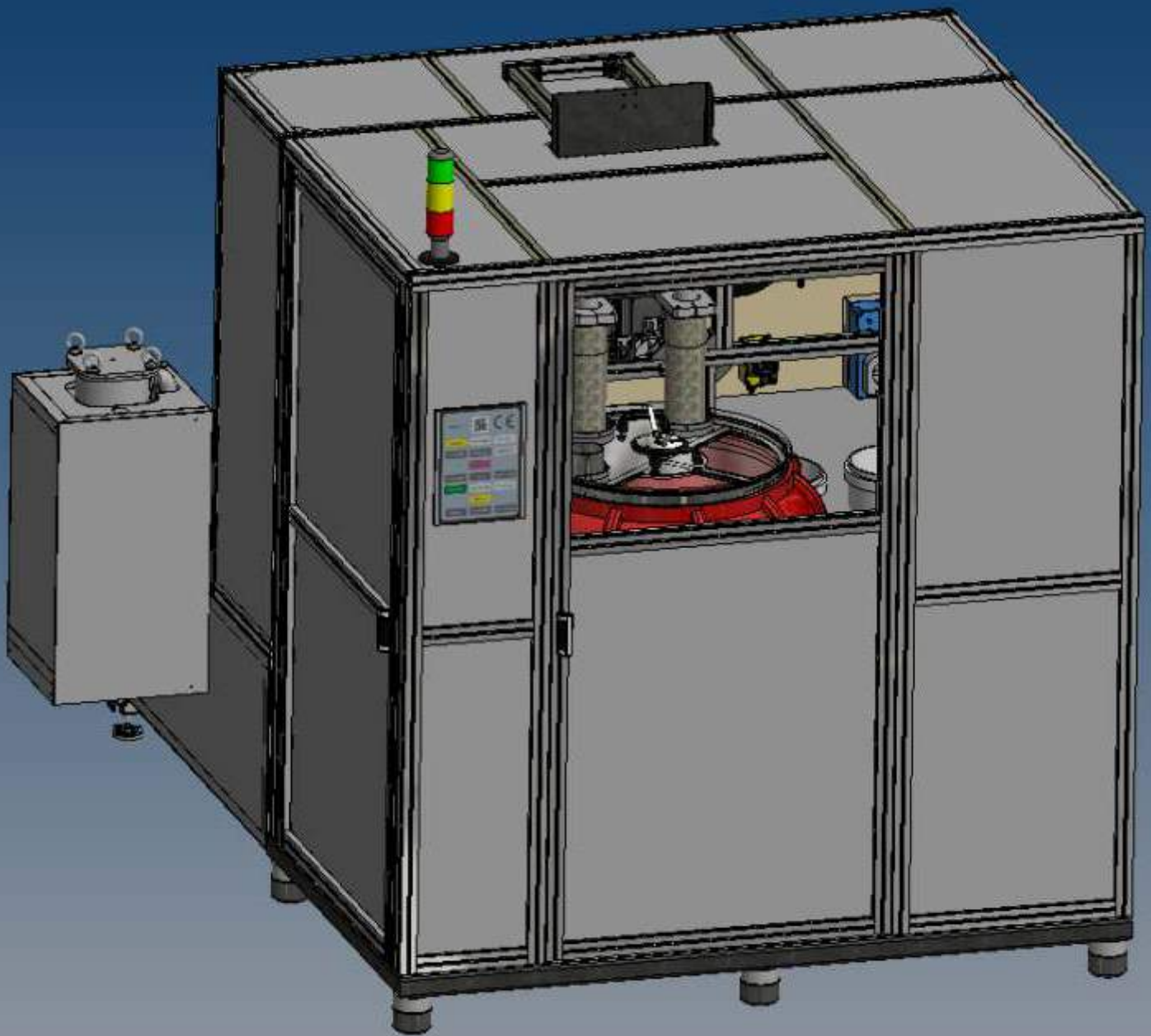
Indeed, taking advantage of the specific elastic and vectorial «QF» media, these systems are able to perform a «Surf-Pro» pre-wash on components with pre-treatment needs and where the waste generated can be relaunched to a collection point external and unrelated to the washing and rinsing tanks.

This allows to manage alternative, more complex and complete processes than just washing and rinsing, including, where required, the ultrasound cavitation action, with obvious advantages in surface treatment strategies.



All ECOSONIC ECS systems offered by Rollwasch® can be customized and get from the considerable portfolio of solutions adopted and presented in this brochure. The standard capacities can be increased with larger toroidal tank models. The used ultrasonic frequencies can be customized according to the specific cavitation needs. Every new challenge inspires us to offer competitive, efficient and innovative solutions. Our test laboratory is available to evaluate new benchmarks and solutions.

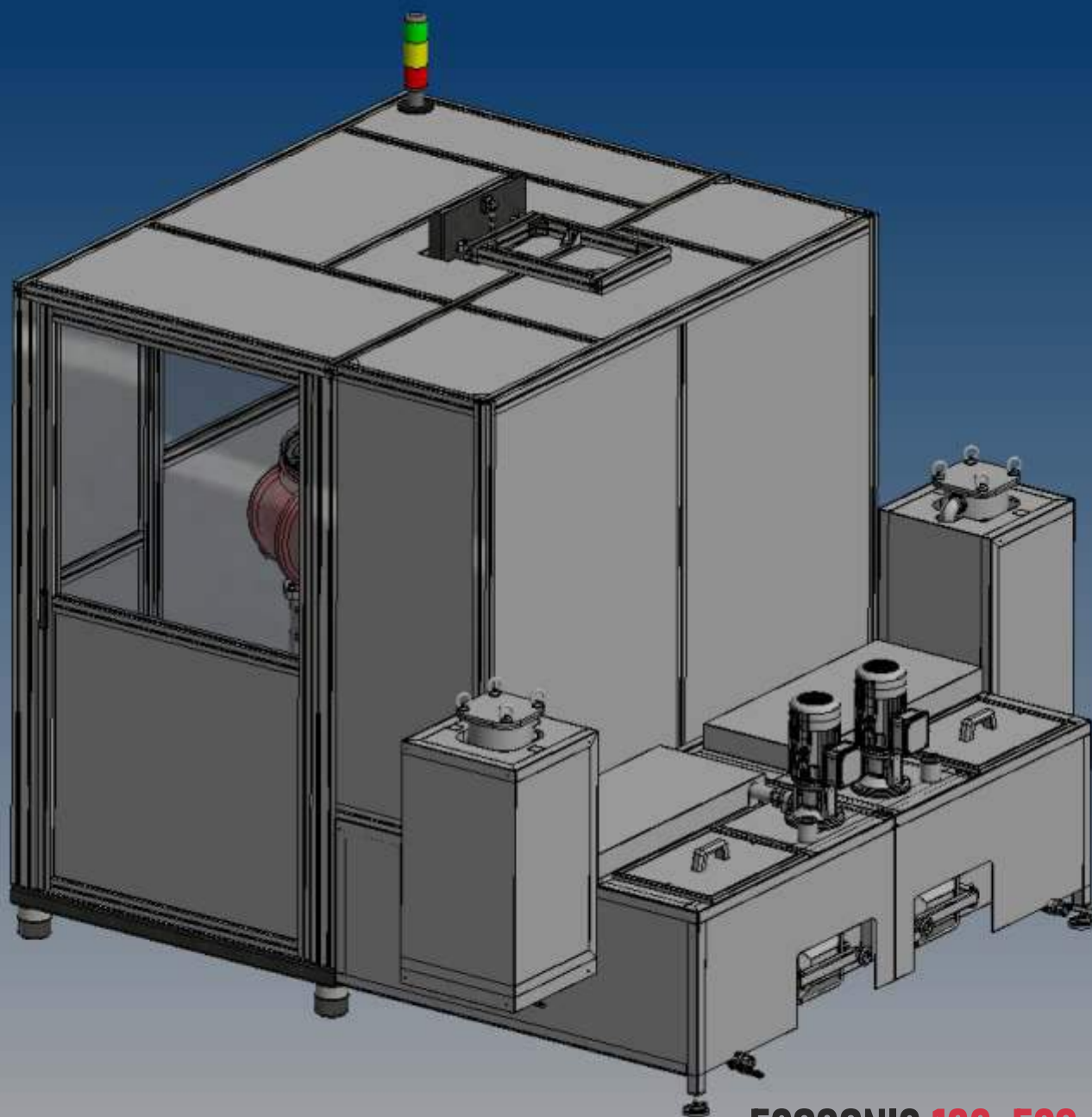
Let's talk about!



## ECOSONIC 120-ECS-2

Eco SONIC

All ECOSONIC 120-ECS-2 systems offered by Rollwasch® are equipped with two sonotrodes, respectively 20 and 40 kHz, connected to an integrated generator in the mainboard and in the management software, in order to be able to use, in the various phases of the process, one or the other cavitation frequency. Ultrasounds can be used both in the pre-wash and in the washing and rinsing phases with clear operational advantages on components with pendulous micro-burrs or even in threaded holes or blind holes - subject to evaluation by means of specific process tests.



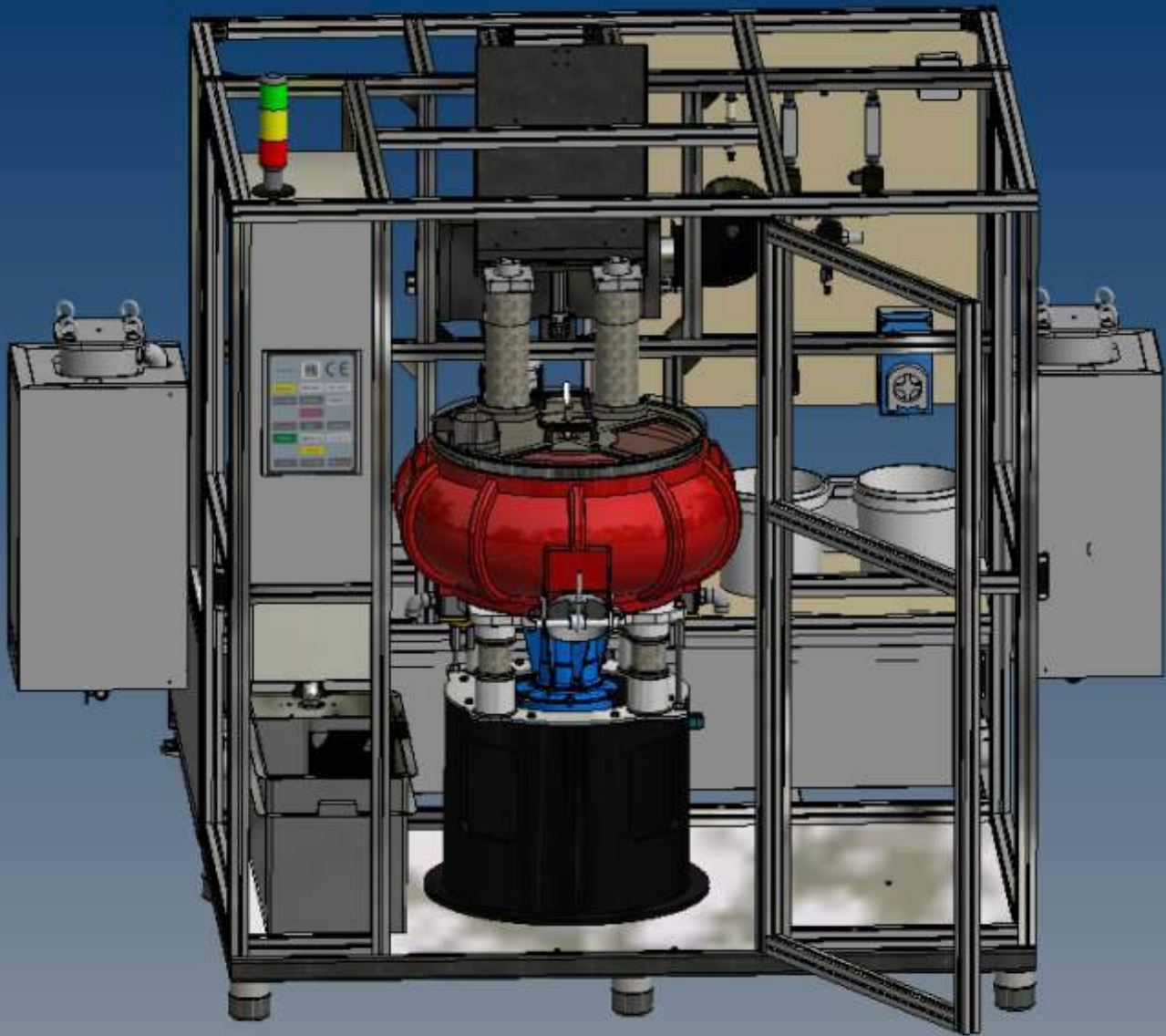
**ECOSONIC 120-ECS-2**

**Eco SONIC**

All ECOSONIC 120-ECS-2 systems offered by Rollwasch® are equipped with two heated and filtered tanks, one for washing and the other for rinsing - each of them with the following characteristics:

200 litre water tank made of 20/10 stainless steel complete with:

- Drawer pre-filter. 2 mm diameter filtration for the water that returns to the tank
- Micro-filtration on the delivery pump, bag filter, filtration degree 50µ
- 0.75 kW vertical pump with immersed stem
- N.3 electric heaters 4 kW each, maximum water temperature 60°C
- PT100 probe for temperature control
- Minimum level probe
- Inspection manhole cover for tank bottom cleaning
- Water loading with ½" manual valve
- Water unloading with 1" manual valve

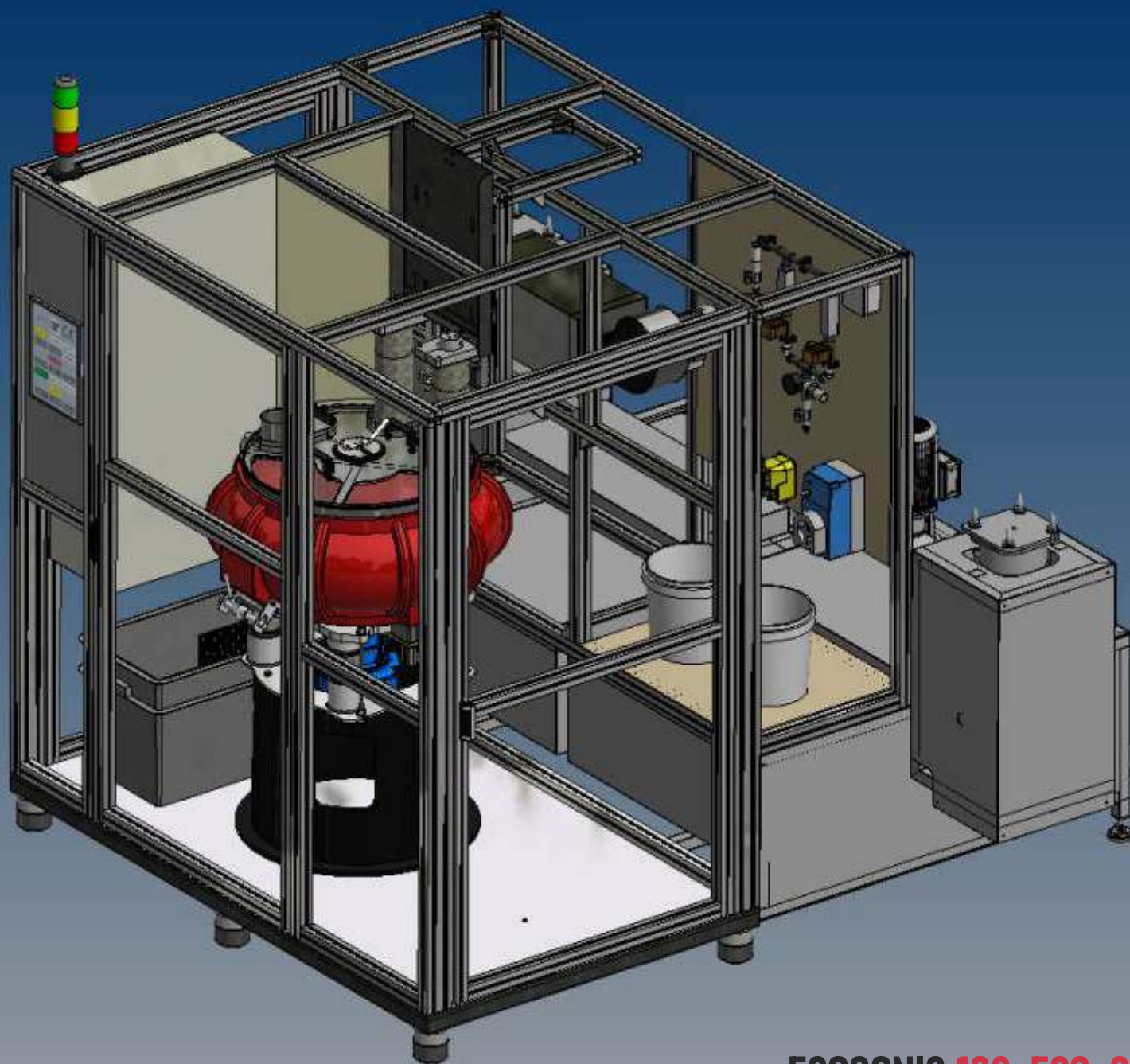


## ECOSONIC 120-ECS-2

Eco SONIC

All ECOSONIC 120-ECS-2 systems offered by Rollwasch® are equipped with recycling tank for the wastewater coming from the pre-wash process. This allows not to pollute the washing and rinsing tanks in vain, in order to ensure the maximum output and duration levels, while the greater polluting can be taken away from the components treated in the system before reaching more refined phases of the automatic process.

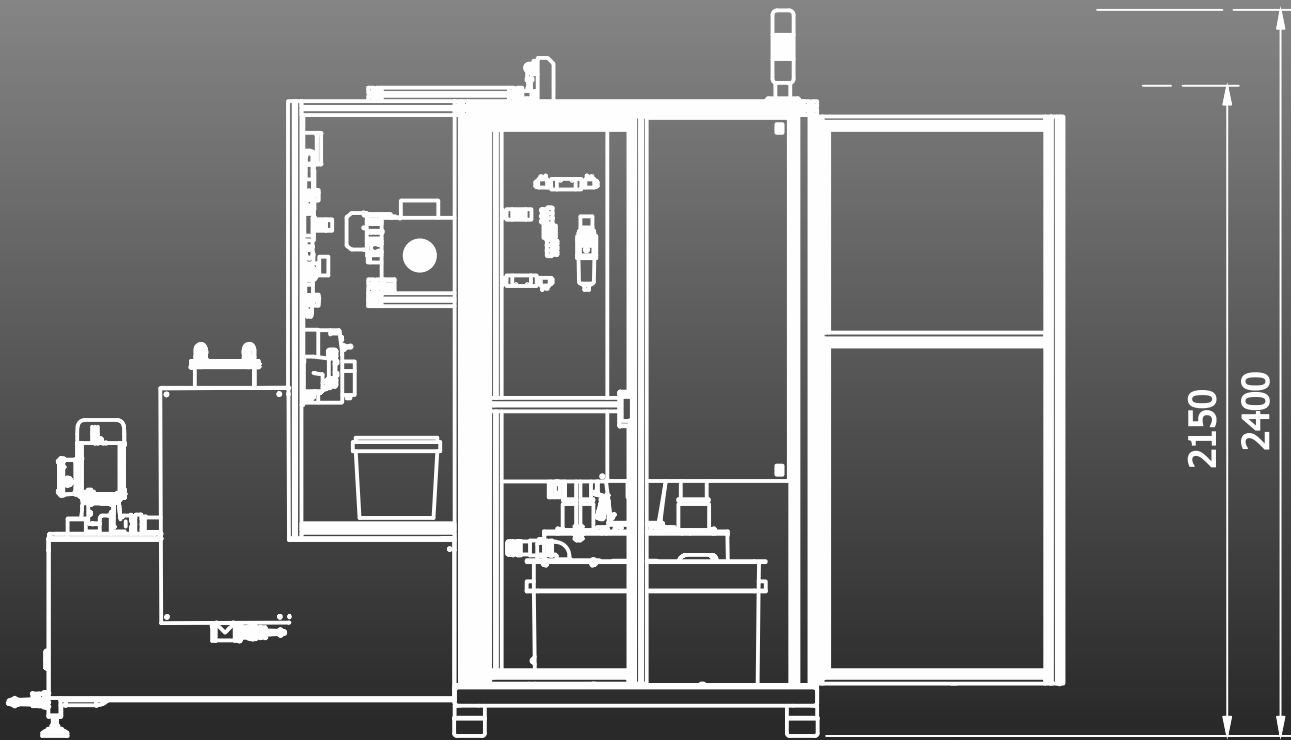
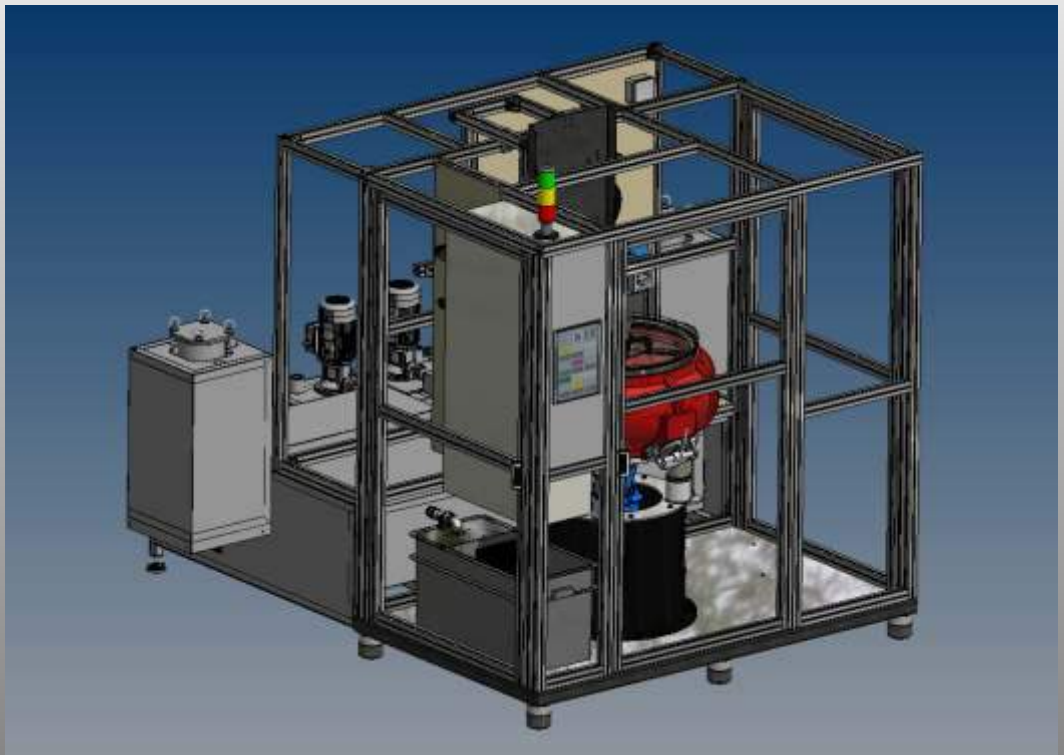




## ECOSONIC 120-ECS-2

Eco SONIC

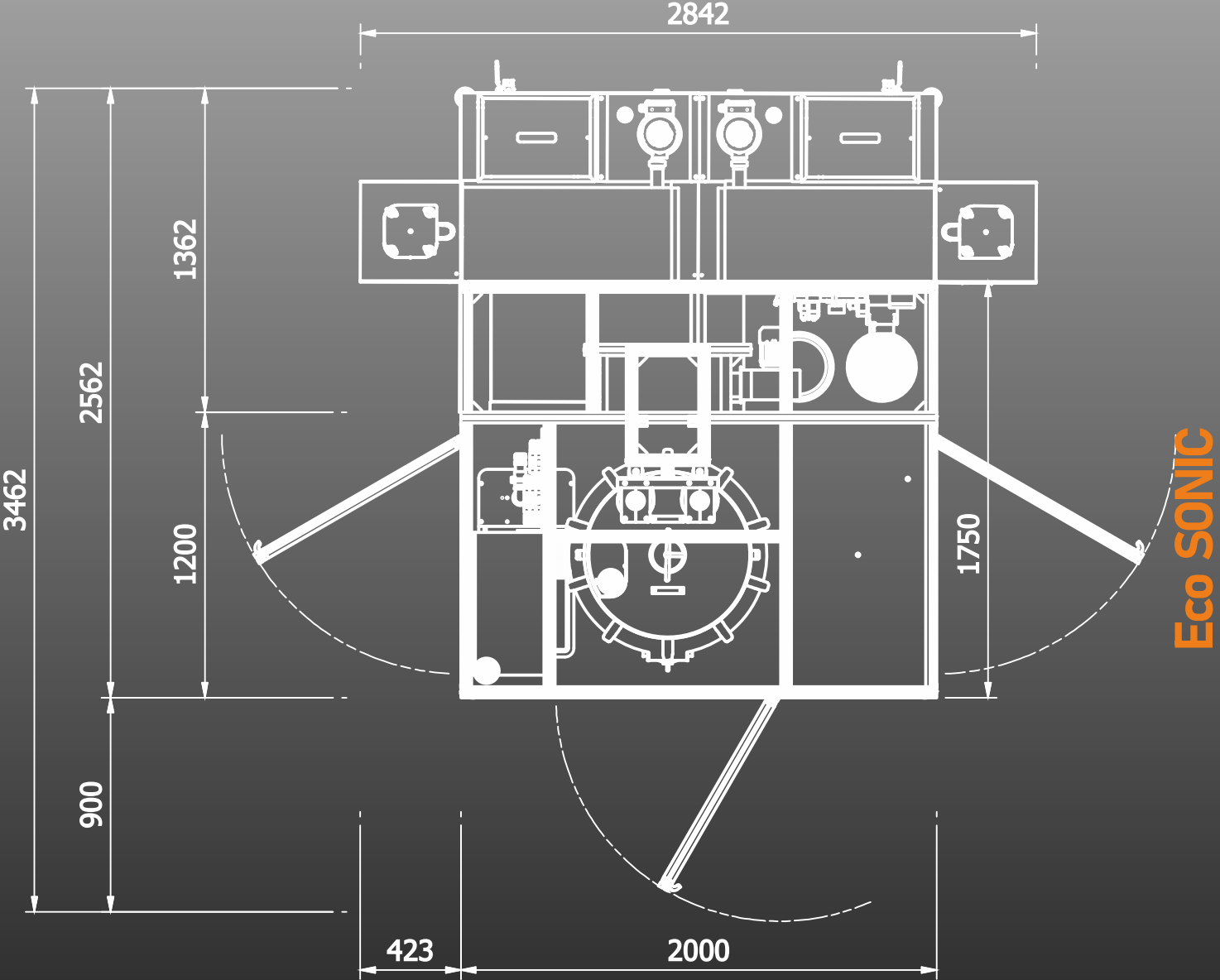
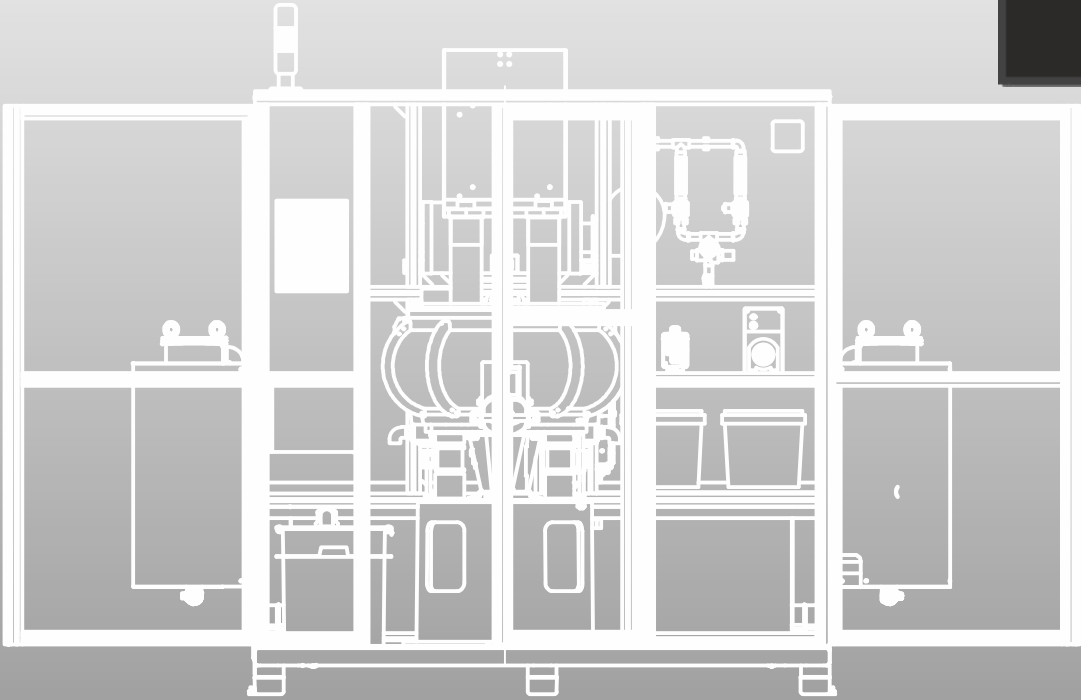
All ECOSONIC 120-ECS-2 systems offered by Rollwasch® are complete with a cabin with the dual purpose of soundproofing the process and simultaneously isolating the main system from the outside.



**ECOSONIC 120-ECS-2**

**Eco SONIC**

All ECOSONIC 120-ECS-2 systems offered by Rollwasch® are complete with internal control board and external HMI touch panel.



**ECOSONIC 120-ECS-2**

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This brochure is for guidance only. Its content can change depending on the development of the product.

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**UK**

## **IntegrAM**

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