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Hospital Equipment Technology
WaSter 50 - WaSter 100



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WaSter Solution



WaSter - Biohazard waste treatment



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Pass-through execution system



WaSter 50



WaSter 100

for biohazard waste treatment



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Medical waste treatment machine



CRYSTAL BROWN



-85%

Water consumption



-40%

Energy consumption



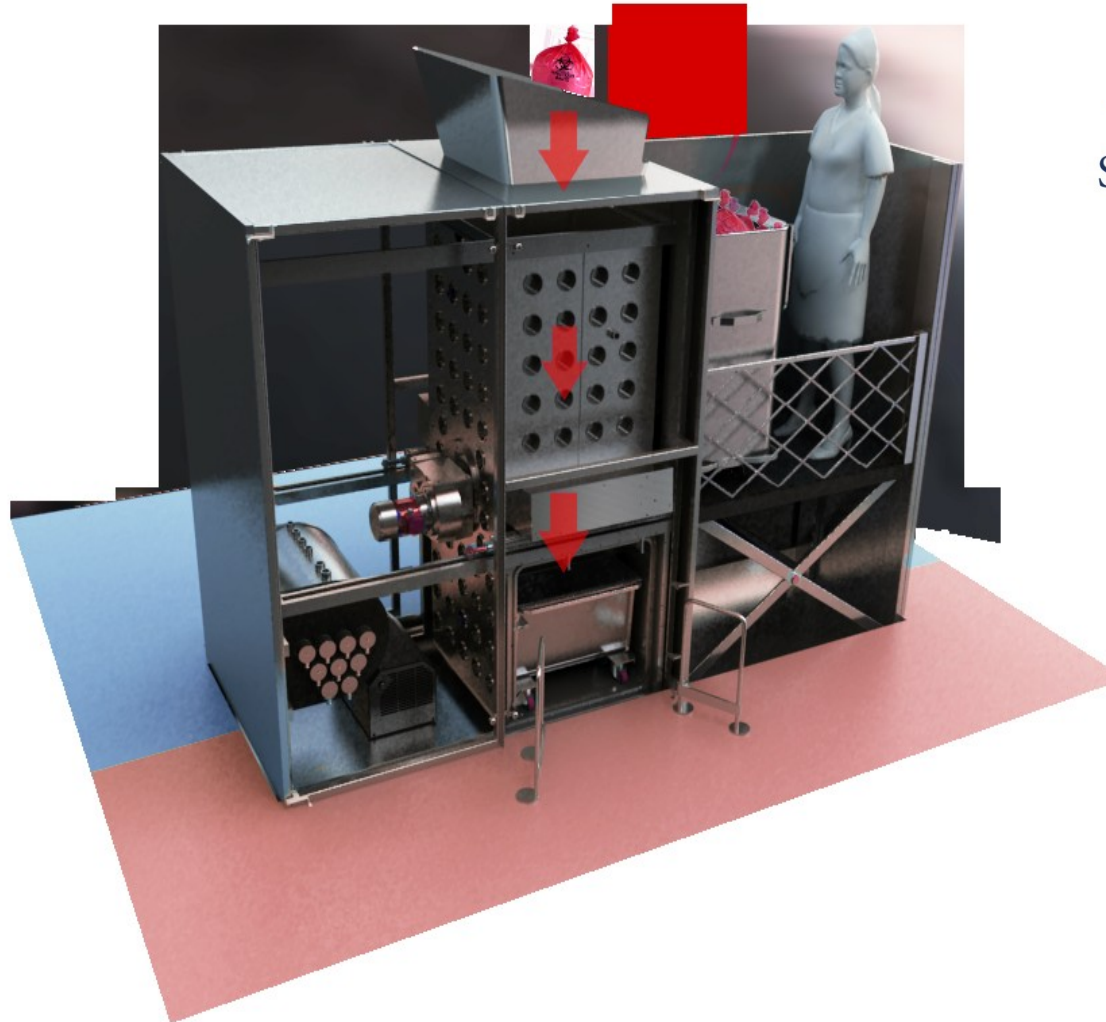
100%

Recycling



-25%

Total cycle time



+50%
Service life

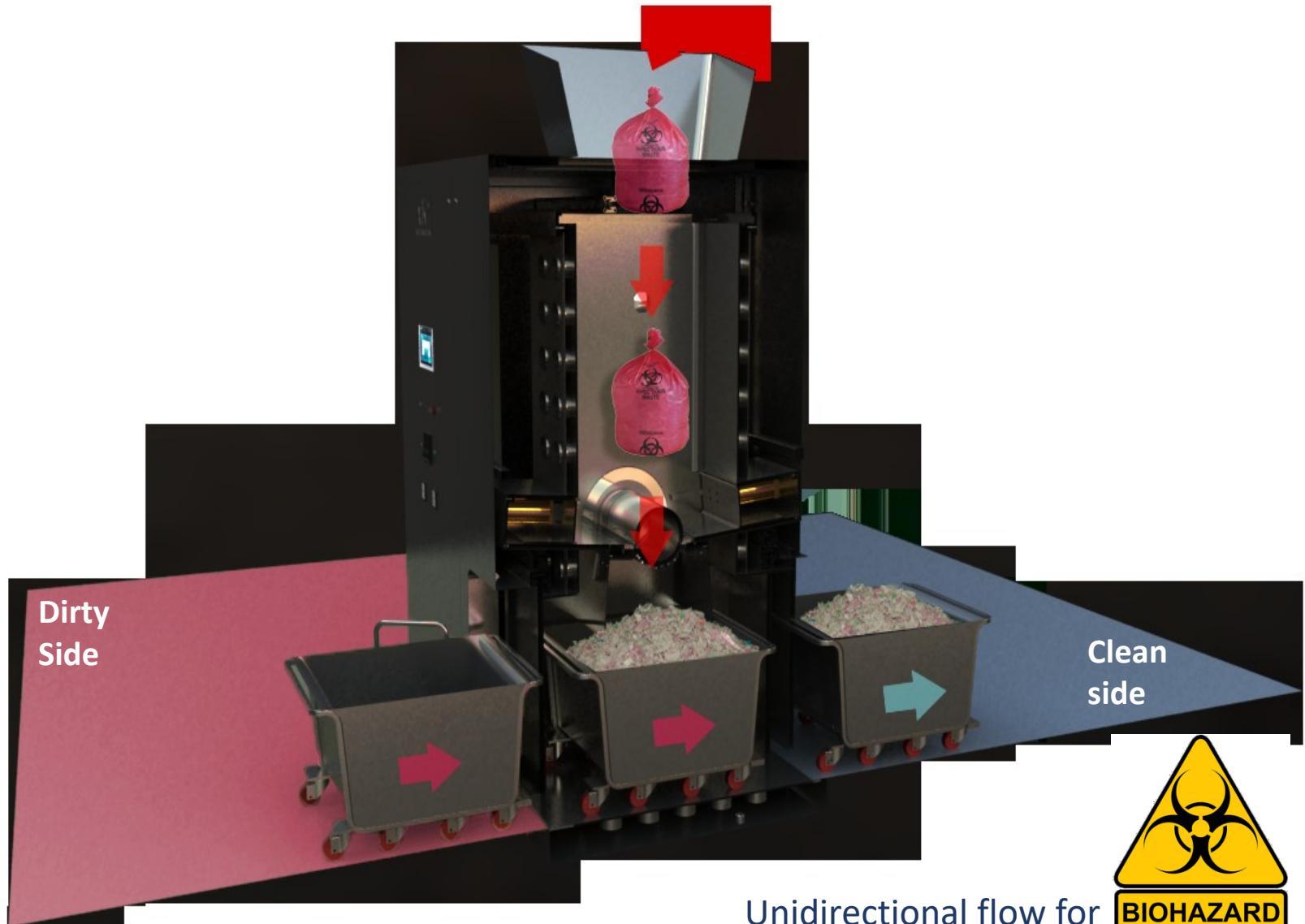


Compact, Safe, Fast for the Treatment of **BIOHAZARD** waste.



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Medical waste treatment machine



Unidirectional flow for  waste



Treatment combined with “5 Guarantees”

The combined treatment of **WaSter** has a number of guarantees that are essential for the safety of the result and repeatability over time:

- Treatment takes place in a tightly closed place to eliminate the risk of transmission via aerosol,
- The trituration system is extremely rigid as it reduces waste to unidentifiable small pieces , to eliminate the risk of recyclability.
- A highly fragmented material is obtained through trituration of the waste that allows the easy removal of air, favoring penetration of saturated steam and, therefore, sterilization to eliminate the risk of biological contamination,
- The type of plant made with innovative construction technical solutions specific for the application with controlled outlets to eliminate the risks of environmental contamination,
- The through-execution of the equipment allows a unidirectional path of the waste and only with positive outcome of the treatment to eliminates the risks of exchange.



Waster offers 5 competitive advantages

- A 80% reduction of volume in favor of transport with costs reduction,
- Easy handling at treatment end due to the fact that the waste is dry,
- Trituration inside the chamber that makes handling safer through sterilization before intervention,
- The cycle takes place in airtight environment, without emission of unpleasant smells,
- The installation with chamber at floor level to facilitate movement of the trolley.



Highlights



- Chamber totally in stainless steel **AISI 316Ti**, thickness 8 mm, easy to clean and fully drainable.
- Jacket totally in stainless steel **AISI 316Ti** , thickness 5 mm.
- Door totally in stainless steel **AISI 316Ti**, thickness 30 mm.
- Electro-polished chamber and doors with **mirror** polished finish.
- Chamber and doors surface **reduction of 35%** after electro-polishing.
- Jacket with chamber **total covering**. No **cold spots** inside the chamber means uniform drying.
- **20 years** warranty for the chamber.
- Piping totally in stainless steels **AISI 316**
- «**Air chamber**» gasket. Perfect seal and **long life**.



Highlights



- Totally insulated with **fire retardant mattress, silicone** and **Kevlar**.
- **Fully dry** vacuum pump. Water consumption for generating vacuum is **zero**. Compatible with steam. **5 years** warranty
- Commercial components supplied by world-wide Leading Companies. Interchangeability with **future** versions.
- **High performance** steam generator.
- **Industrial** construction concepts.
- **Remote** maintenance control device.
- Ability to operate in accordance with **21 CFR Part 11 FDA**.
- **B&D Test** Electronic / Automatic.



Main technical features



- 1 **AISI 304 stainless steel frame, front and side panels.**
- 2 **AISI 316Ti, 8 mm thickness vertical and horizontal chamber, fully drainable and cleanable.**
- 3 **Chamber bottom with central drain and filtration.**
- 4 **Jacket made of stainless steel AISI 316Ti, thickness 5 mm, total covering the chambers.**
- 5 **Chamber and doors mirror finished.**
- 6 **Master module with three AISI304 stainless steel doors.**
- 7 **Door vertical and horizontal automatic sliding device.**
- 8 **Door sealing by dynamic «air chamber» gasket.**
- 9 **Stainless steel shredder integrated in the vertical chamber.**
- 10 **Dual waste pushing device against the shredder.**
- 11 **Chambers, doors, steam generator, and pipeline insulated by kevlar fabric.**
- 12 **Bio-seal shield: separation between sterile side and clean side. (optional)**
- 13 **Steam generation by internal electrical steam generator made of AISI 304 (E).**
- 14 **Steam generation by direct steam connection to an external source (S).**
- 15 **Steam generation by internal electrical steam generator and direct steam connection (ES).**



Main technical features



- 16 Discharge temperature control and setting device. (optional)
- 17 Dry mechanical vacuum pump compatible with steam.
- 18 Double data detection systems- Siemens integrated safety programmable electronic controller.
- 19 Touch screen Siemens TP900 Comfort, 9 inches, full color and high resolution.
- 20 Second Siemens color, high resolution touch screen monitor on clean side. (optional)
- 21 Built-in alphanumerical printer.
- 22 USB connection for data back-up.
- 23 Remote connection-ready. (optional)
- 24 Sterilization cycles for empty glassware, rubber materials, fabrics, liquids in sealed
- 25 containers and liquids in open containers and cycle for infected liquids and materials.
Microbiological filtration at discharge.
- 26 Condensate vaporization device. (optional)
- 27 Burner at chamber air outlet.
- 28 B&D Test Electronic / Automatic. (optional)

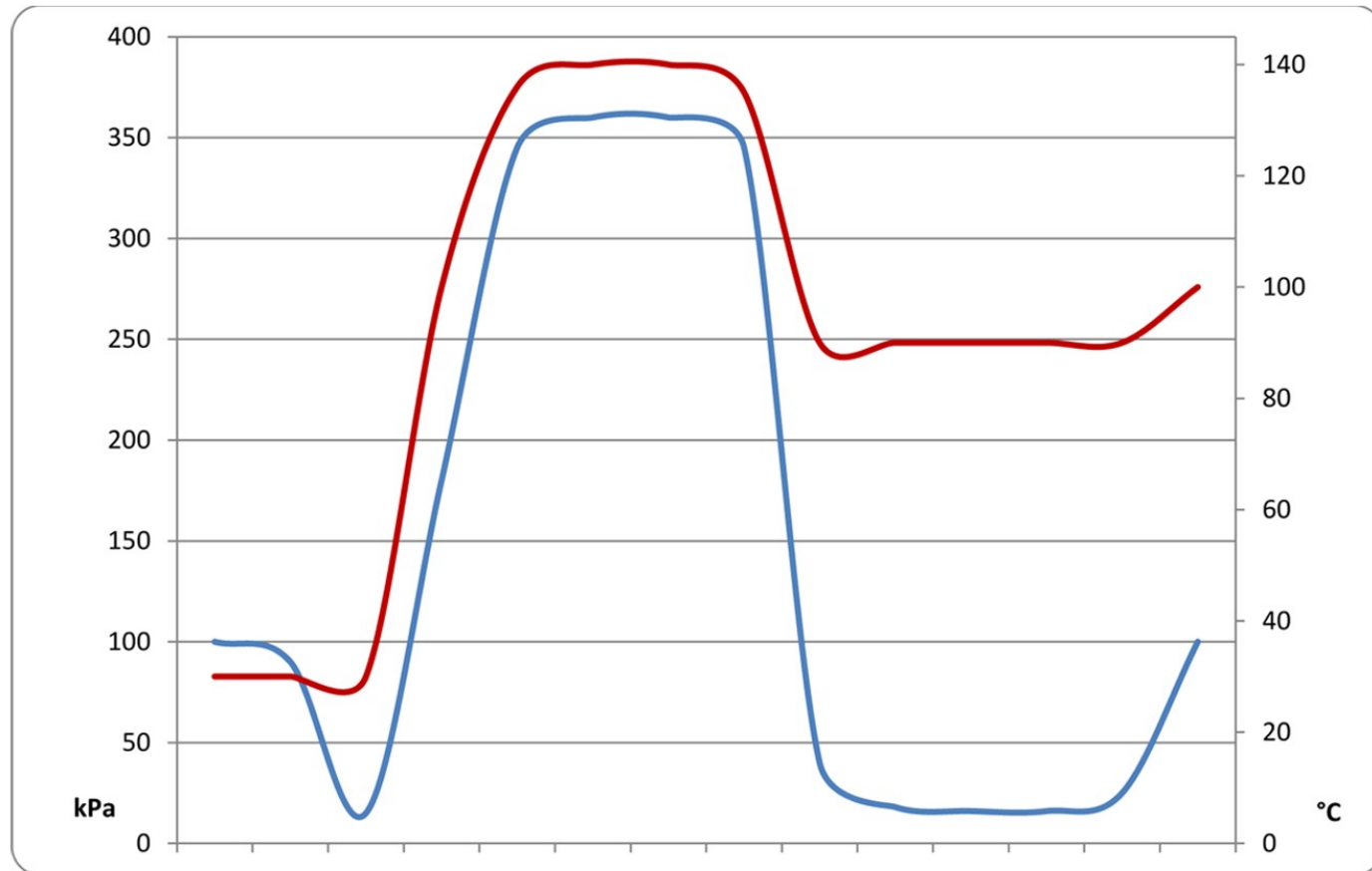


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Graphic process



Temperature ■
Pressure ■



Graphic of shredding and sterilization process

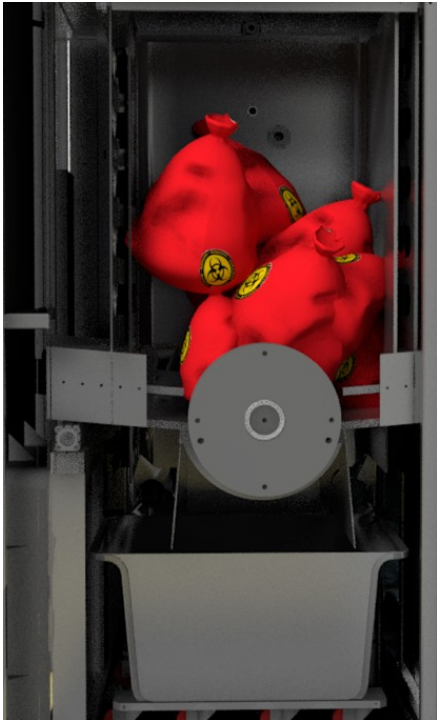


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WaSter material treatment



1



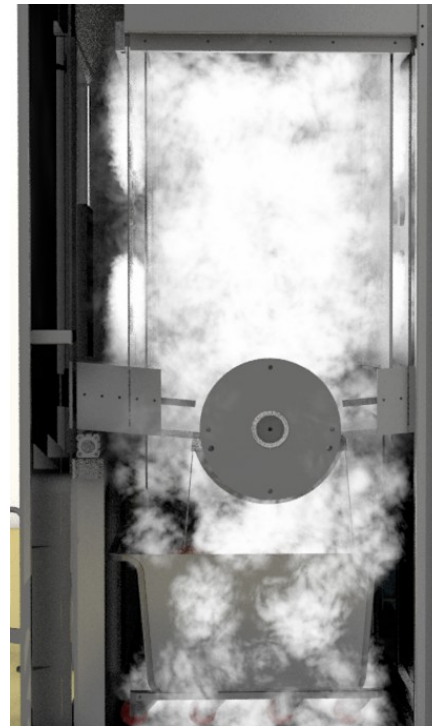
The waste is placed
In the chamber.

2



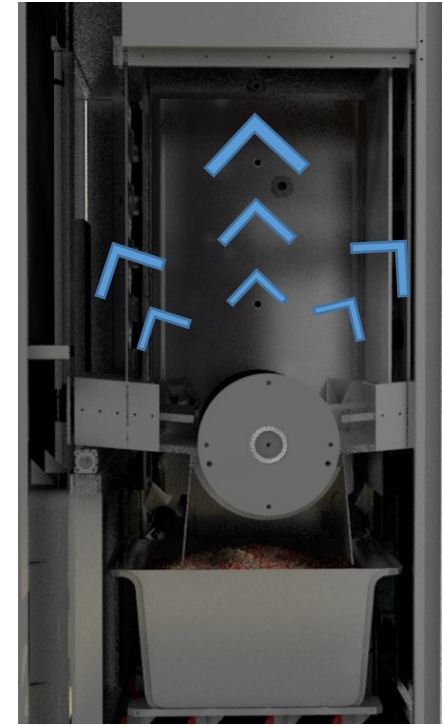
The waste is put under
vacuum and shredded.

3



The waster is in direct
contact with dry saturated steam.

4



The waste passes
the drying phase.



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WaSter flow process



1- Reception of infected material

The infected material is brought inside the special cart and placed inside the cargo area. A different cart to receive the shredded enters WaSter



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WaSter flow process



2- Manual charge of infected material and starting of cycle

The cart containing the infected material is raised by lift integrated on the charge level. The load is carried out manually. The basket is hermetically sealed in position to receive the rape. The cycle begins.



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WaSter flow process



3 - Removing sterile material

The cart containing the shredded waste leaves the sterile side of WaSter.

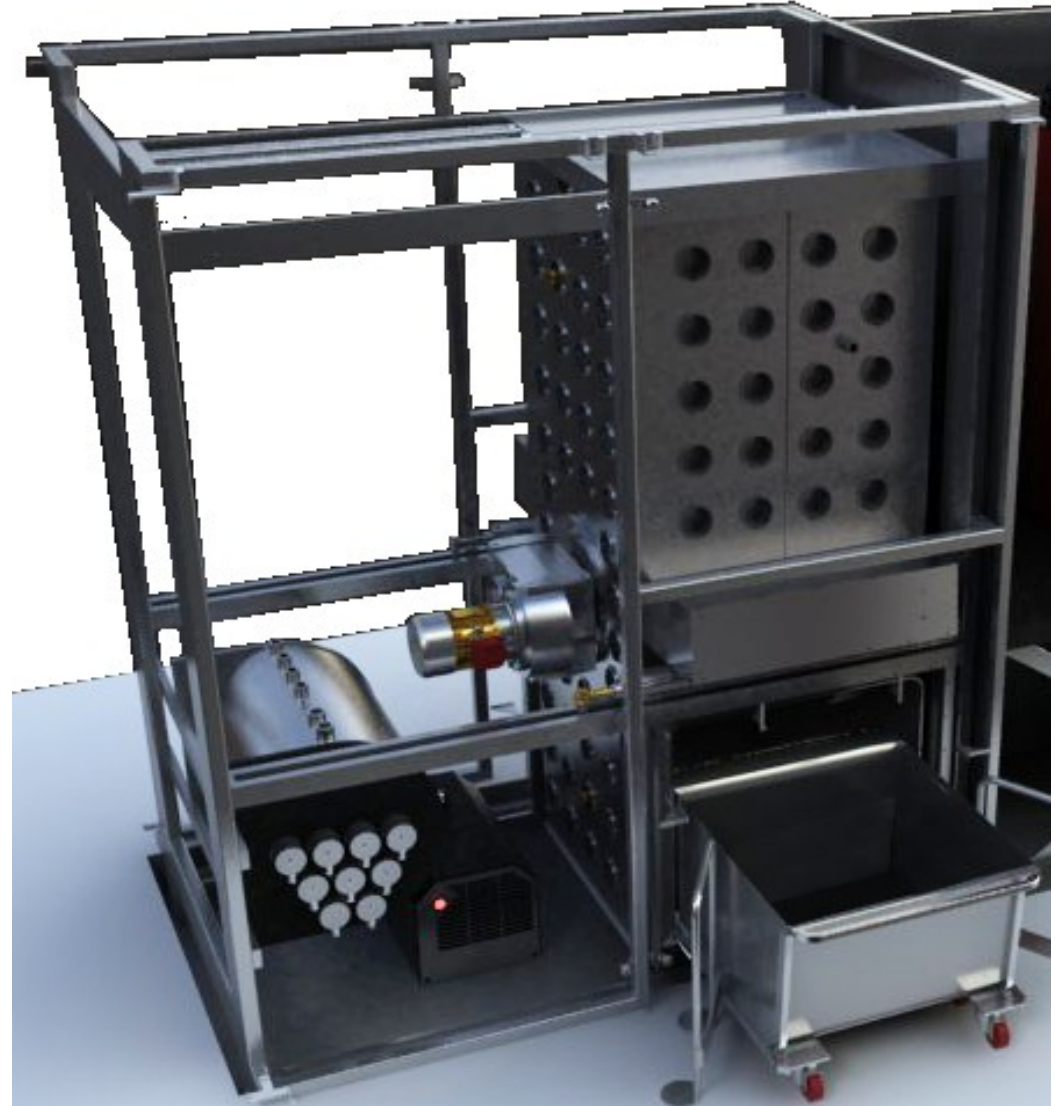
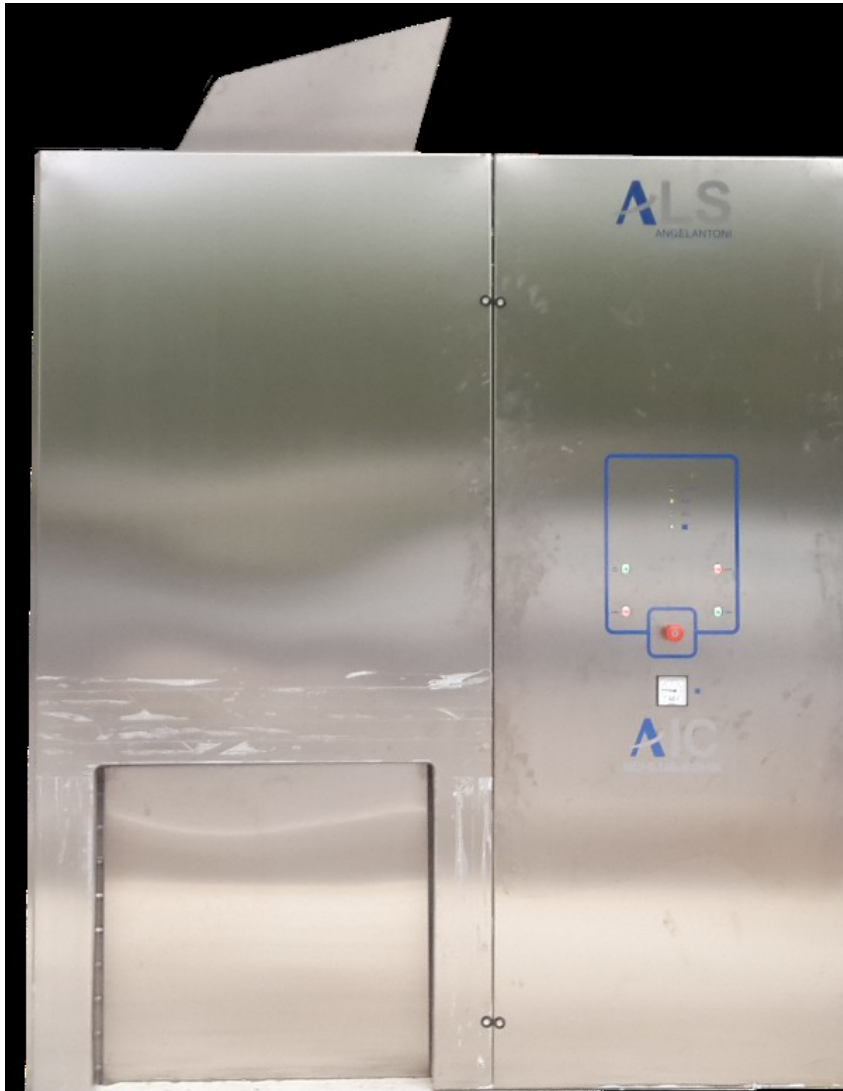


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Main technical features



1. AISI 304 stainless steel frame, front and side panels.





Main technical features



2. AISI 316Ti, 8 mm thickness vertical and horizontal chamber, fully drainable and cleanable.



3. Chamber bottom with central drain and filtration.





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Main technical features

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4. Jacket made of stainless steel AISI 316Ti, thickness 5 mm, total covering the chamber.

5. Chamber and doors mirror finished.



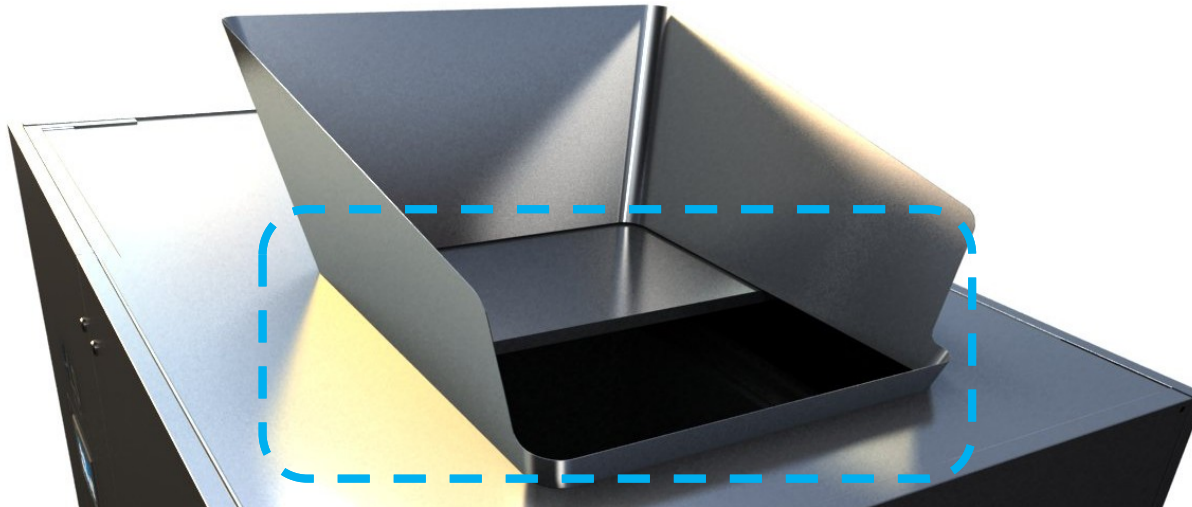
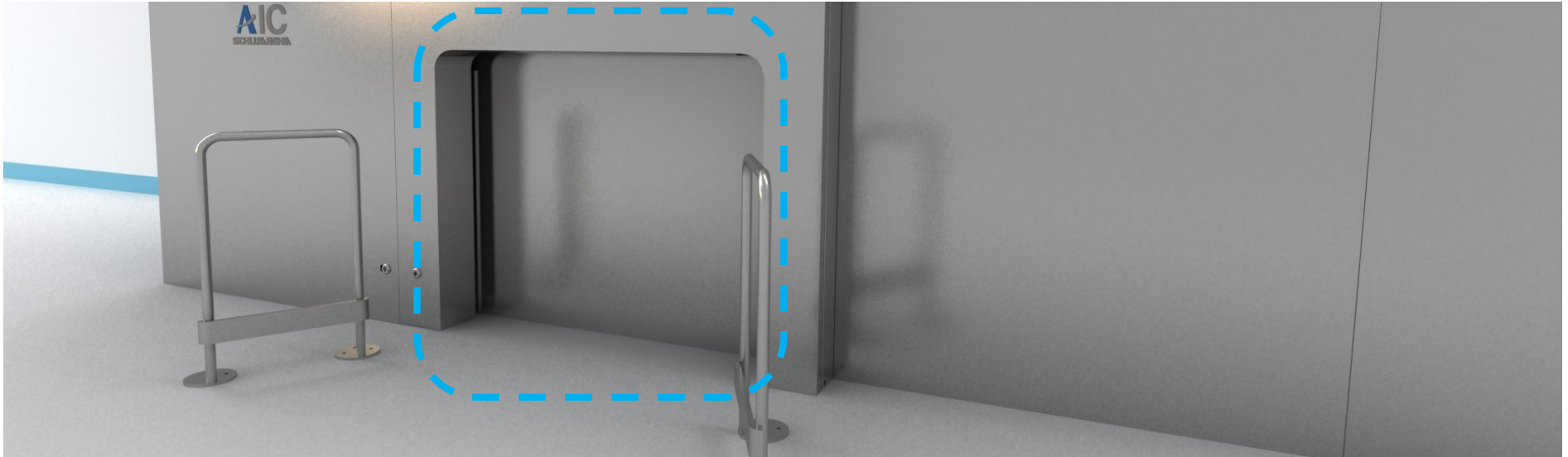


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Main technical features



6. Master module with three AISI304 stainless steel doors.





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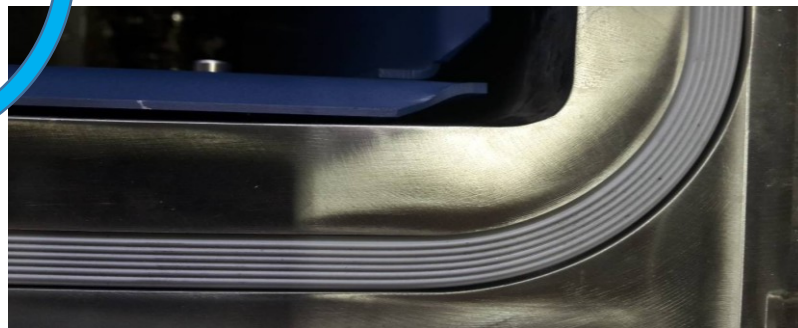
Main technical features



7. Doors horizontal automatic sliding device.



8. Doors seal device with dynamic gaskets "air chamber" type .



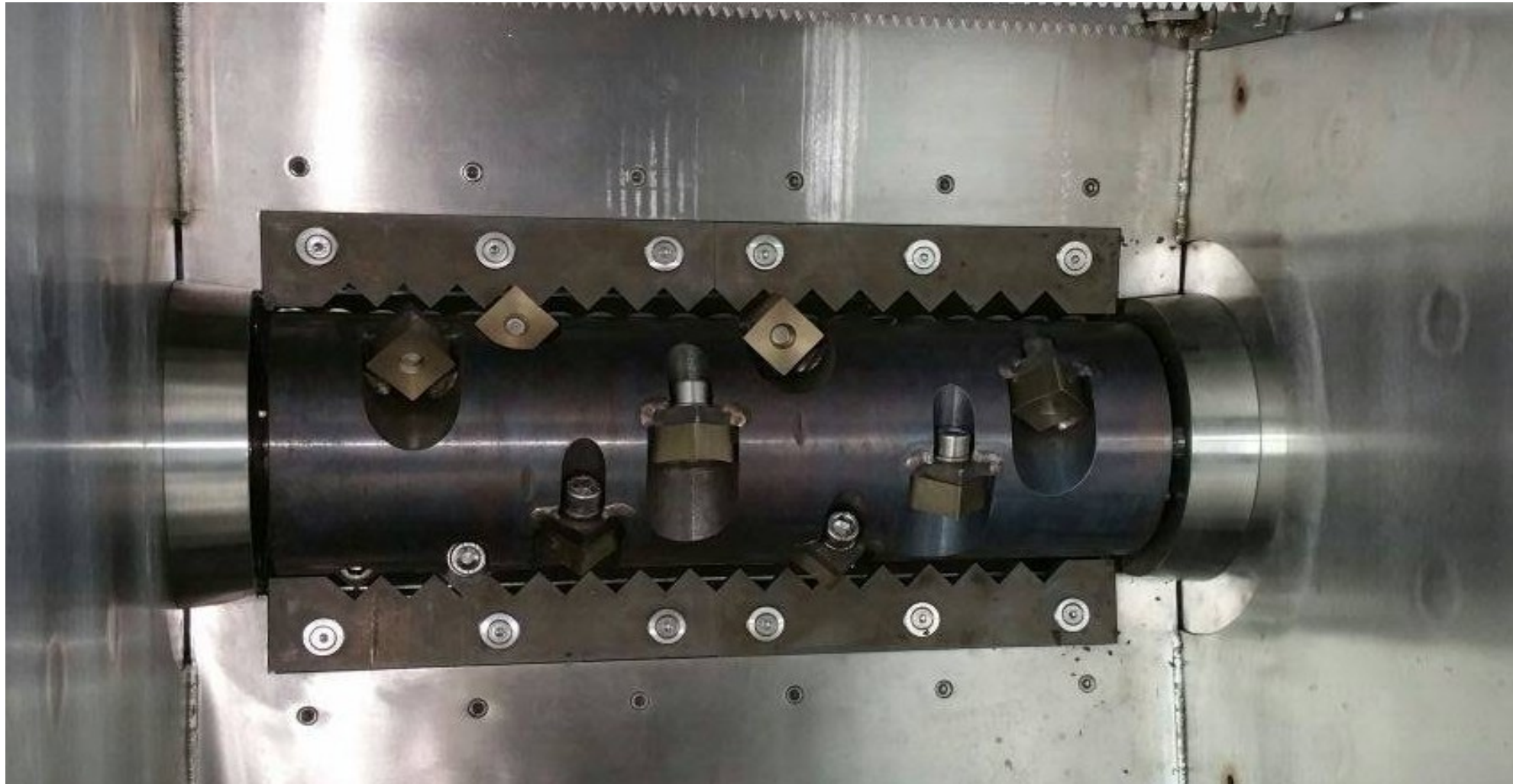


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Main technical features



9. Stainless steel shredder integrated in the vertical chamber.



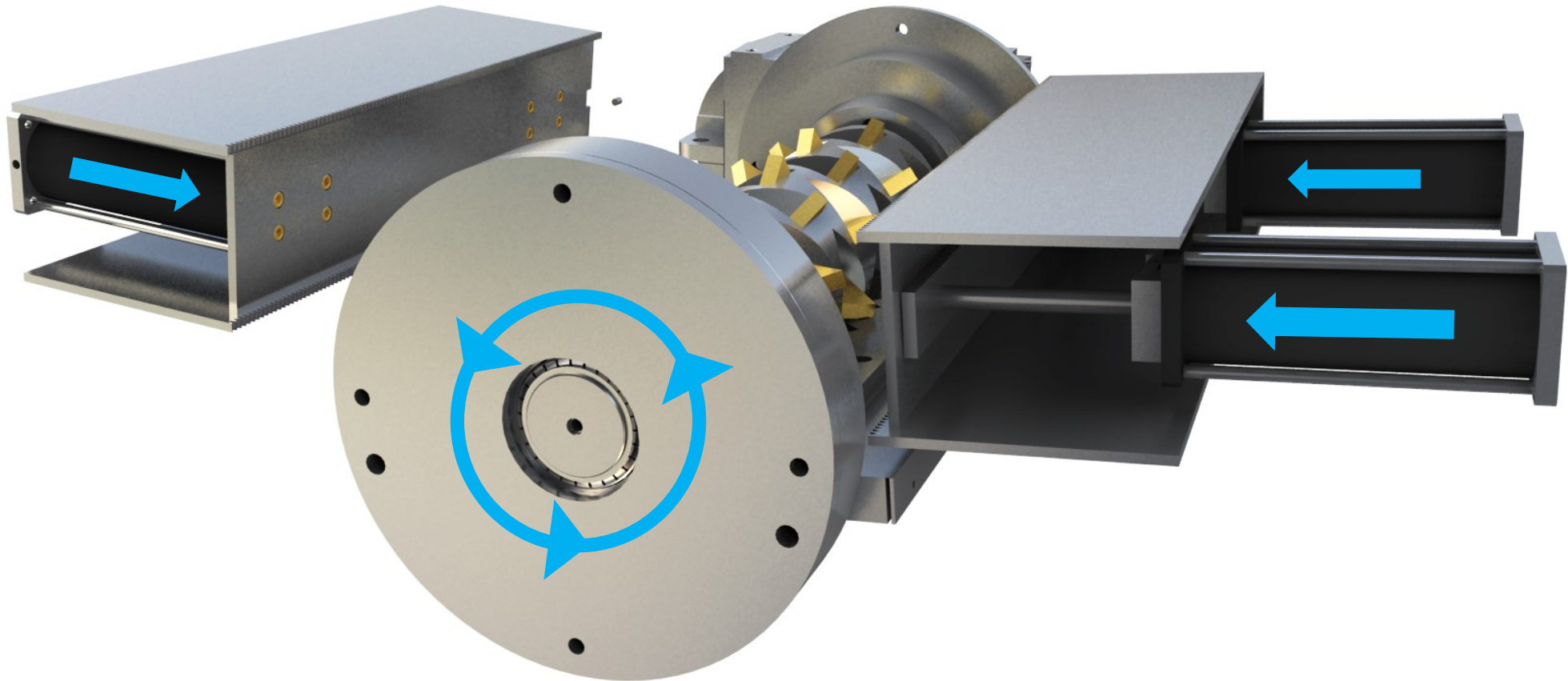


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Main technical features



10. Dual waste pushing device against the shredder.



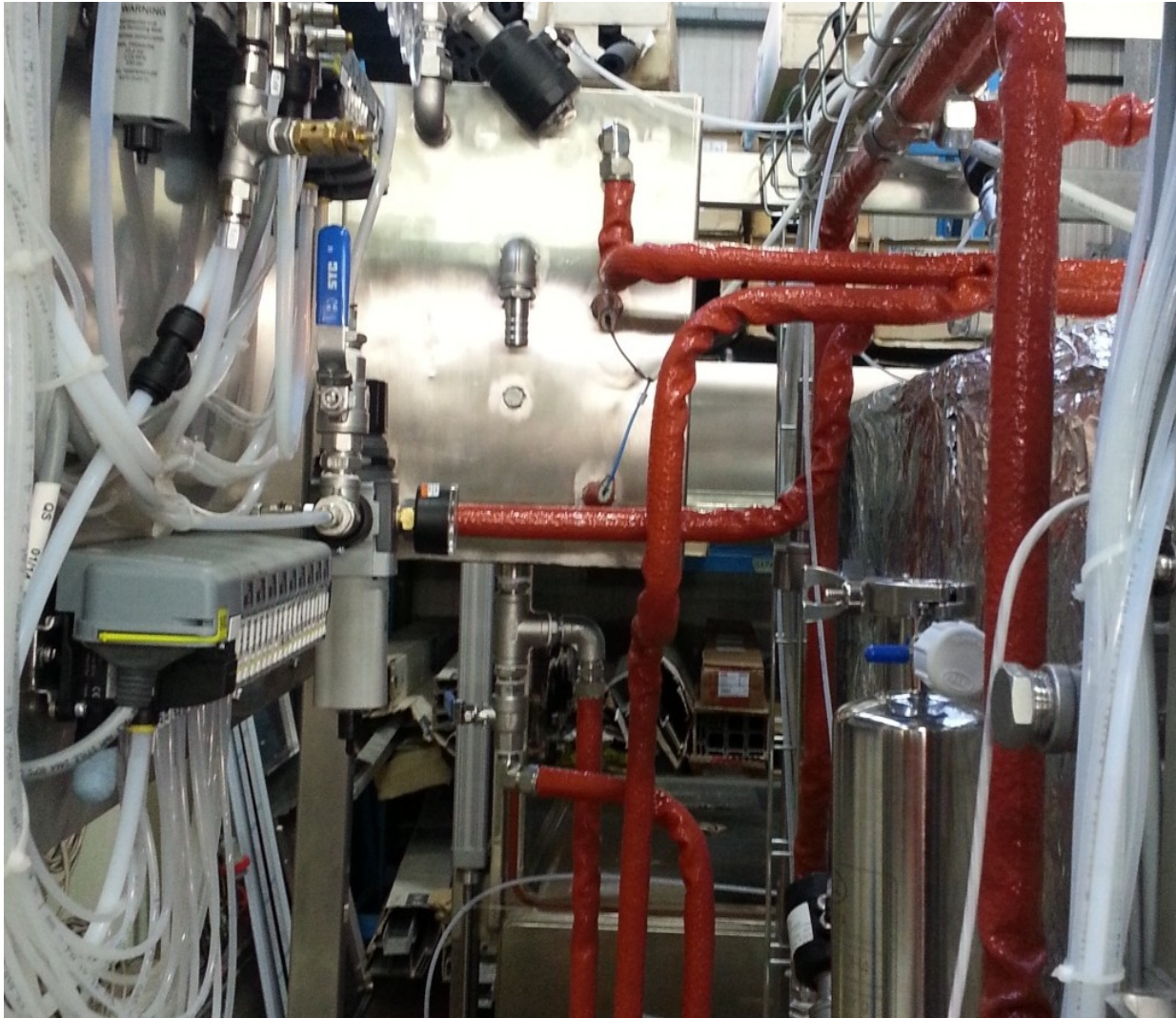


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Main technical features



11. Chambers, doors, steam generator, condensator and pipeline insulated by kevlar fabric.



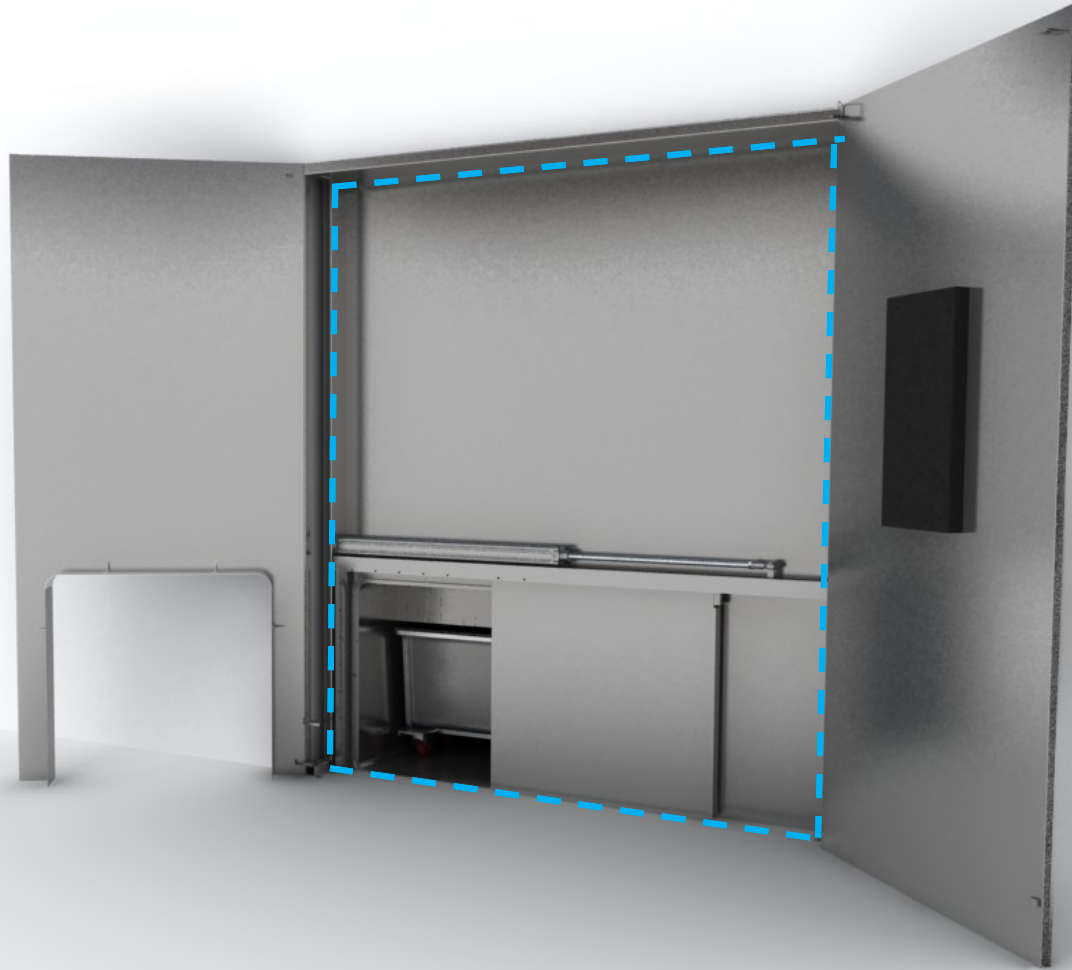


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Main technical features



12. Bio-seal shield: separation between sterile side and clean side. (optional)





Main technical features



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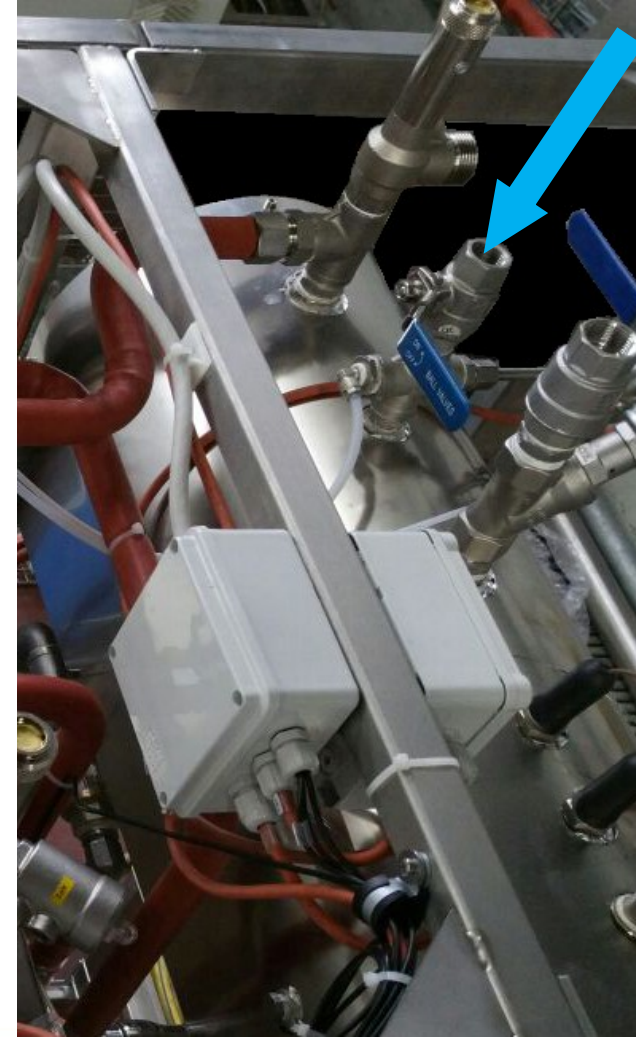
13. Steam generation by internal electrical steam generator made of AISI 304 (E).



14. Steam generation by direct steam connection to an external source (S).



15. Steam generation by internal electrical steam generator and direct steam connection (ES).





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GROW UP
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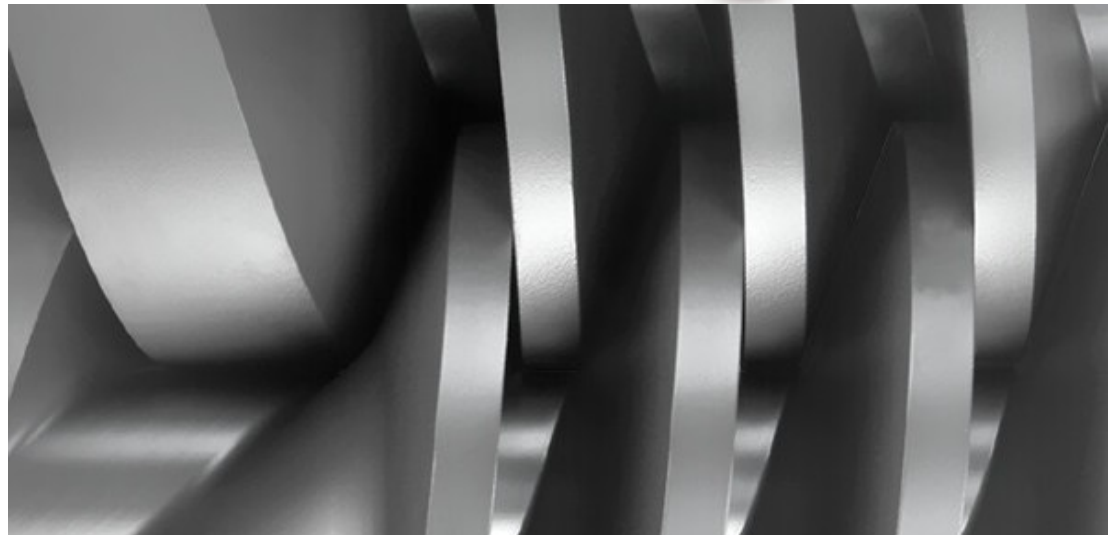
Main technical features



16. Discharge temperature control and setting device. (optional)



17. Dry mechanical vacuum pump compatible with steam.





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Main technical features

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18. Double data detection systems- Siemens integrated safety programmable electronic controller.



19. Touch screen Siemens TP900 Comfort, 9 inches, full color and high resolution.



20. Second Siemens colour, high resolution touch screen monitor on clean side. (optional)



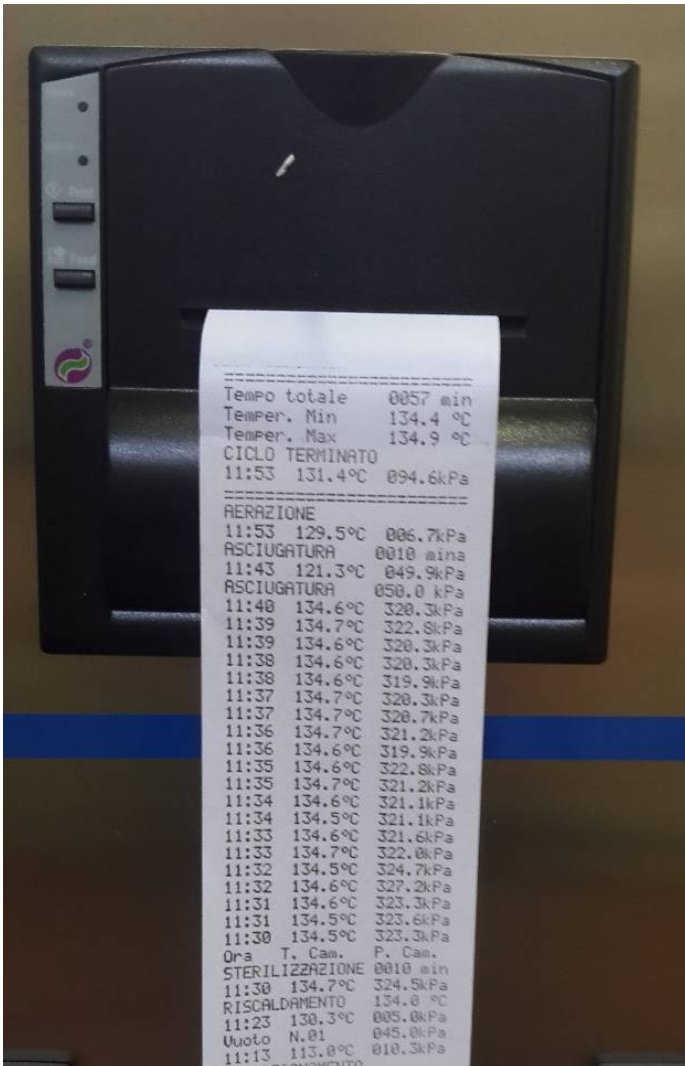


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Main technical features

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21. Built-in alphanumeric printer.



23. Remote connection-ready. (optional)



22. Usb connection for data back-up





Main technical features



Example of shredded waste.

24. Sterilization cycles for empty glassware, rubber materials, fabrics, liquids in sealed containers and liquids in open containers and cycle for infected liquids and materials.

Final result:
Sterile, Dry, Tiny,
Unrecognizable,
Domestic.



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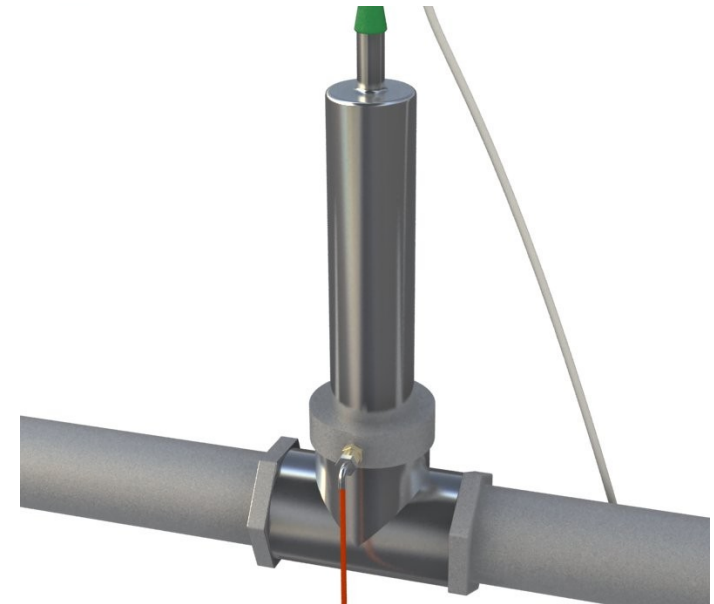
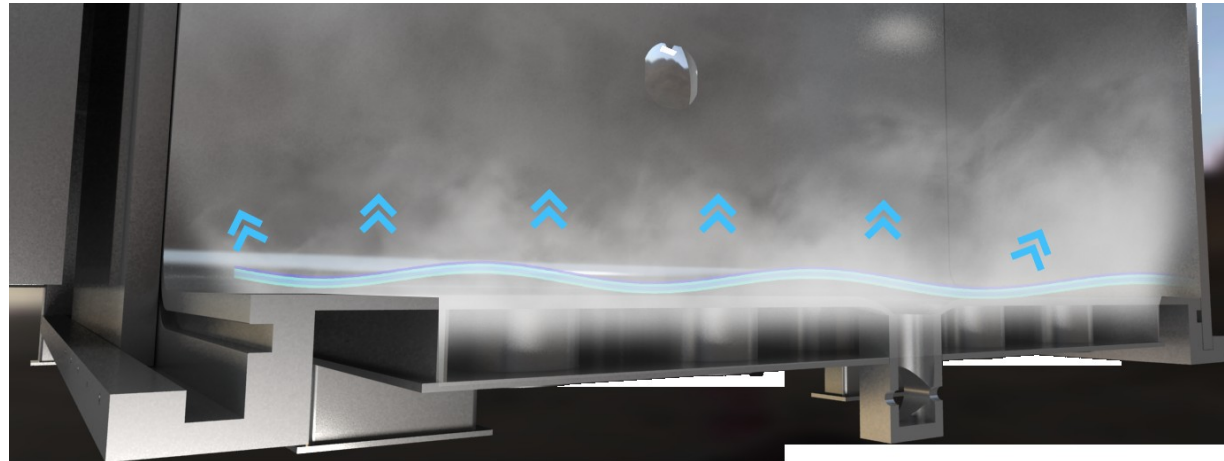
Main technical features



25. Microbiological filtration at discharge.



26. Condensate vaporization device. (optional)





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Main technical features

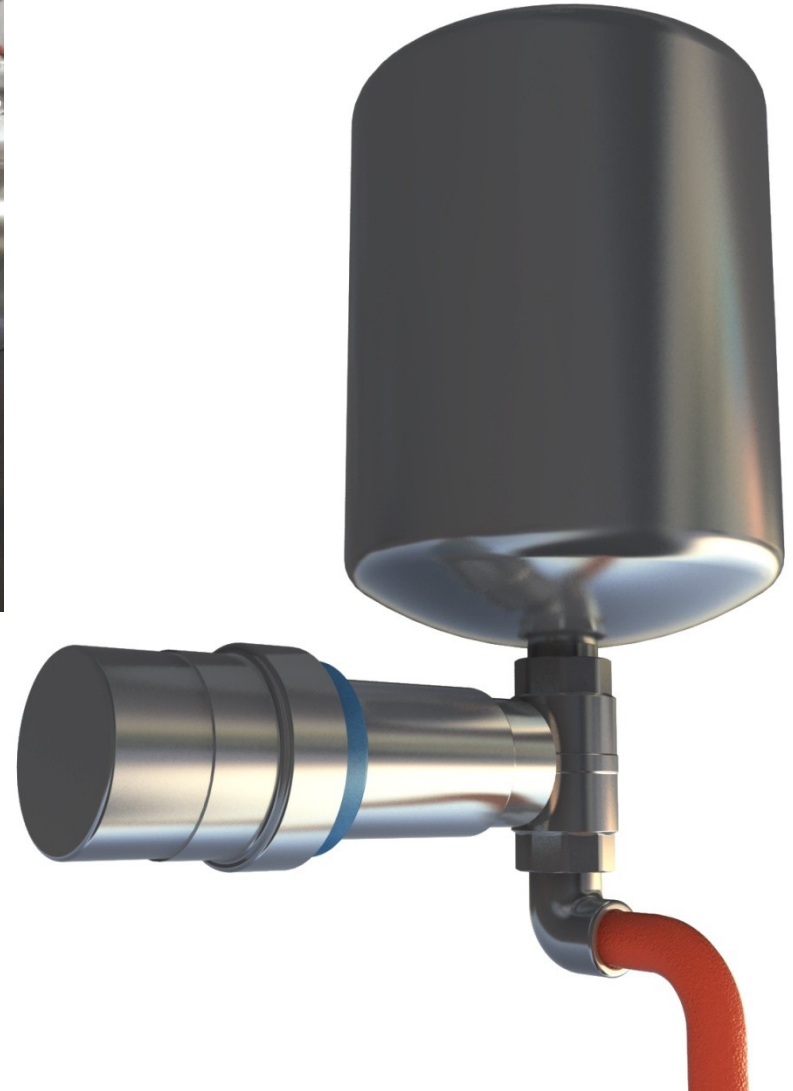


SCHLUNBOHN

27. Burner at chamber air outlet.



28. B&D Test Electronic / Automatic. (optional)





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Industrial construction



The position of the components, main functional units and the operational phases are designed to facilitate pre-assemblies and general assemblies, to significantly reduce times and costs in the serial production. The reduction of phases and the repetition of assembly operations, together with the optimisation of the semi-finished products, advantage the industrialisation of the production process and guarantee the constant high quality standards of the finished product.





Industrial construction



All the commercial components are manufactured by leading companies worldwide
and easily available on the market.



SIEMENS

ROLLON®
Linear Evolution



CUSTOM®



blum®



spirax/sarco

Rexroth
Bosch Group

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REPUBBLICA ITALIANA

Ministero delle Attività Produttive

Ministero delle Infrastrutture e dei Trasporti

OVV

OVV

MANAGEMENT SYSTEM CERTIFICATE

Il presente certificato è rilasciato in conformità con la norma UNI EN ISO 9001:2008

Il presente certificato è rilasciato in conformità con la norma UNI EN ISO 14001:2005

Il presente certificato è rilasciato in conformità con la norma UNI EN ISO 45001:2018

Il presente certificato è rilasciato in conformità con la norma UNI EN ISO 9001:2008

Il presente certificato è rilasciato in conformità con la norma UNI EN ISO 14001:2005

Il presente certificato è rilasciato in conformità con la norma UNI EN ISO 45001:2018

ANGELANTONI INDUSTRIE S.r.l.

Sezione Legale: Località Cossato, 804 - 00100 Roma (RM) - Italy

È conforme ai requisiti della norma UNI EN ISO 9001:2008

È conforme ai requisiti della norma UNI EN ISO 14001:2005

È conforme ai requisiti della norma UNI EN ISO 45001:2018

UNI EN ISO 9001:2008 (ISO 9001:2008)

UNI EN ISO 14001:2005 (ISO 14001:2005)

UNI EN ISO 45001:2018 (ISO 45001:2018)

Scopo dell'attività in cui il sistema di gestione è applicato:

Produzione e commercializzazione di prodotti e servizi in conformità con i requisiti del cliente e delle norme applicabili.

Settore di attività:

Industria di produzione e commercializzazione di prodotti e servizi in conformità con i requisiti del cliente e delle norme applicabili.

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PROLAB
proven by laboratories

TEST REPORT
Report Number: 100

Safety requirements for electrical equipment for measurement, control and laboratory use
Part 1: General requirements

Report number	01/2017/001	Date of issue of the report and of the certificate
Order reference	000000000	
Number of pages	200	
Client's name	Agropur (ex. Cerealis)	
Address	10 rue de la République - 92000 Nanterre (France)	
File description		
Manufacturer	AGRO PUR (ex. CEREALIS)	
Product description	No. de commande et numéro de série: 9100-0100	
Test procedure	CEI 014988	
Test results	OK	
Report Number	000000000	
Test date	10/05/2017	
Test Report 01/21 (Revision 01)	10/05/2017	
Test Report 01/22 (Revision 01)	10/05/2017	
Test Report 01/23 (Revision 01)	10/05/2017	
Test Report 01/24 (Revision 01)	10/05/2017	
Test Report 01/25 (Revision 01)	10/05/2017	
Test Report 01/26 (Revision 01)	10/05/2017	
Test Report 01/27 (Revision 01)	10/05/2017	
Test Report 01/28 (Revision 01)	10/05/2017	
Test Report 01/29 (Revision 01)	10/05/2017	
Test Report 01/30 (Revision 01)	10/05/2017	
Test Report 01/31 (Revision 01)	10/05/2017	
Test Report 01/32 (Revision 01)	10/05/2017	
Test Report 01/33 (Revision 01)	10/05/2017	
Test Report 01/34 (Revision 01)	10/05/2017	
Test Report 01/35 (Revision 01)	10/05/2017	
Test Report 01/36 (Revision 01)	10/05/2017	
Test Report 01/37 (Revision 01)	10/05/2017	
Test Report 01/38 (Revision 01)	10/05/2017	
Test Report 01/39 (Revision 01)	10/05/2017	
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Test Report 01/57 (Revision 01)	10/05/2017	
Test Report 01/58 (Revision 01)	10/05/2017	
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Test Report 01/83 (Revision 01)	10/05/2017	
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Test Report 01/87 (Revision 01)	10/05/2017	
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Test Report 01/92 (Revision 01)	10/05/2017	
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Test Report 01/94 (Revision 01)	10/05/2017	
Test Report 01/95 (Revision 01)	10/05/2017	
Test Report 01/96 (Revision 01)	10/05/2017	
Test Report 01/97 (Revision 01)	10/05/2	

ALS
ANGENSTÄNDEN
LÖSUNGSSYSTEME

Unit 1 and Maintenance Manual - Volume 1.0

Medical Waste Treatment

Series WASTER

SERIES WASTER

USER'S AND MAINTENANCE MANUAL

Angenstärken Infektion Control
Angenstärken Life Science
Fax: +39 075-895351
Fax: +39 075-8953512

CE

ARCHA			
TECHNICAL REPORT			
WaSter®			
WORK PACKAGE 3:			
TESTING – VALIDATION –			
PROTOTYPE CERTIFICATION			
Project Number : DB1112000150007			
July 30, 2015			

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Installation



Installation





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Installation



Installation



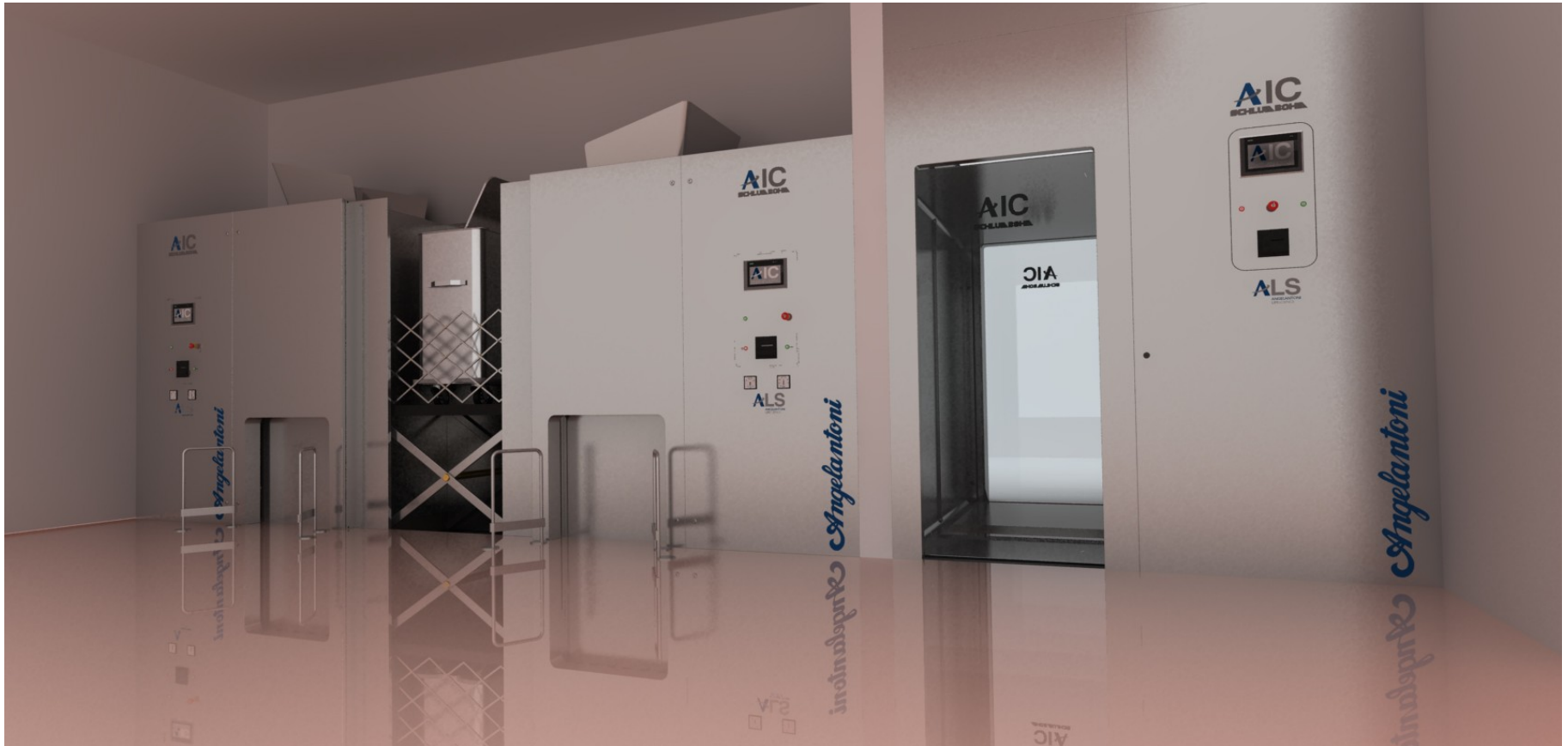


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Installation

AIC

SCHLUNBOHN



Example of WaSter installation

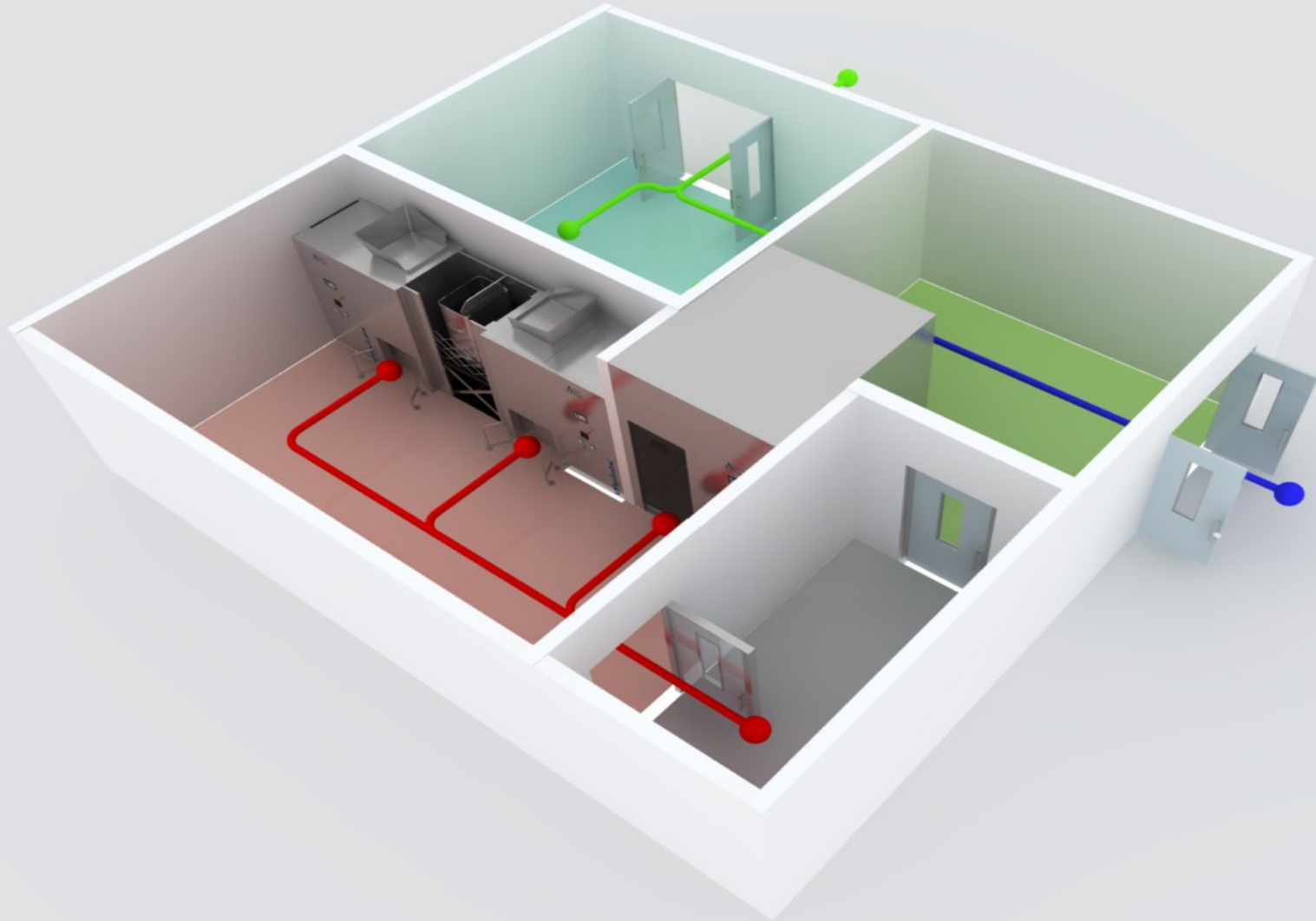


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WaSter lay out design



ARCHITETTURA



Example of WaSter installation



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WaSter range of product



WaSter 50



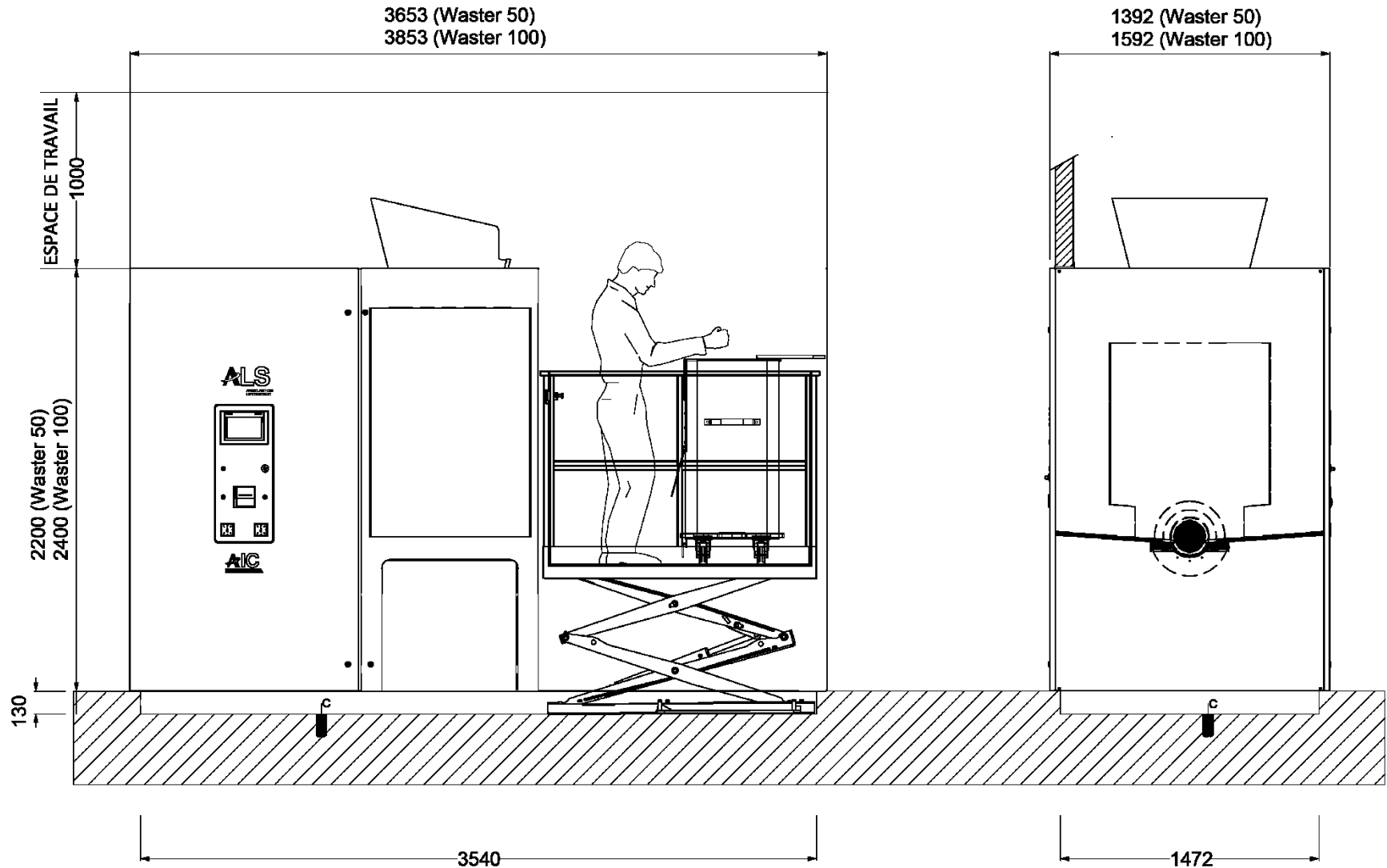
WaSter 100

Model	Productivity	Waste weight volume ratio	Waste volume reduction ratio	Waste loading volume	Treated waste final volume	Cycle time
WaSter50	50 Kg/h	1/10	1/5	500	100	1h
WaSter100	100 Kg/h	1/10	1/5	1000	200	1h



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Installation layout WaSter 50 - 100



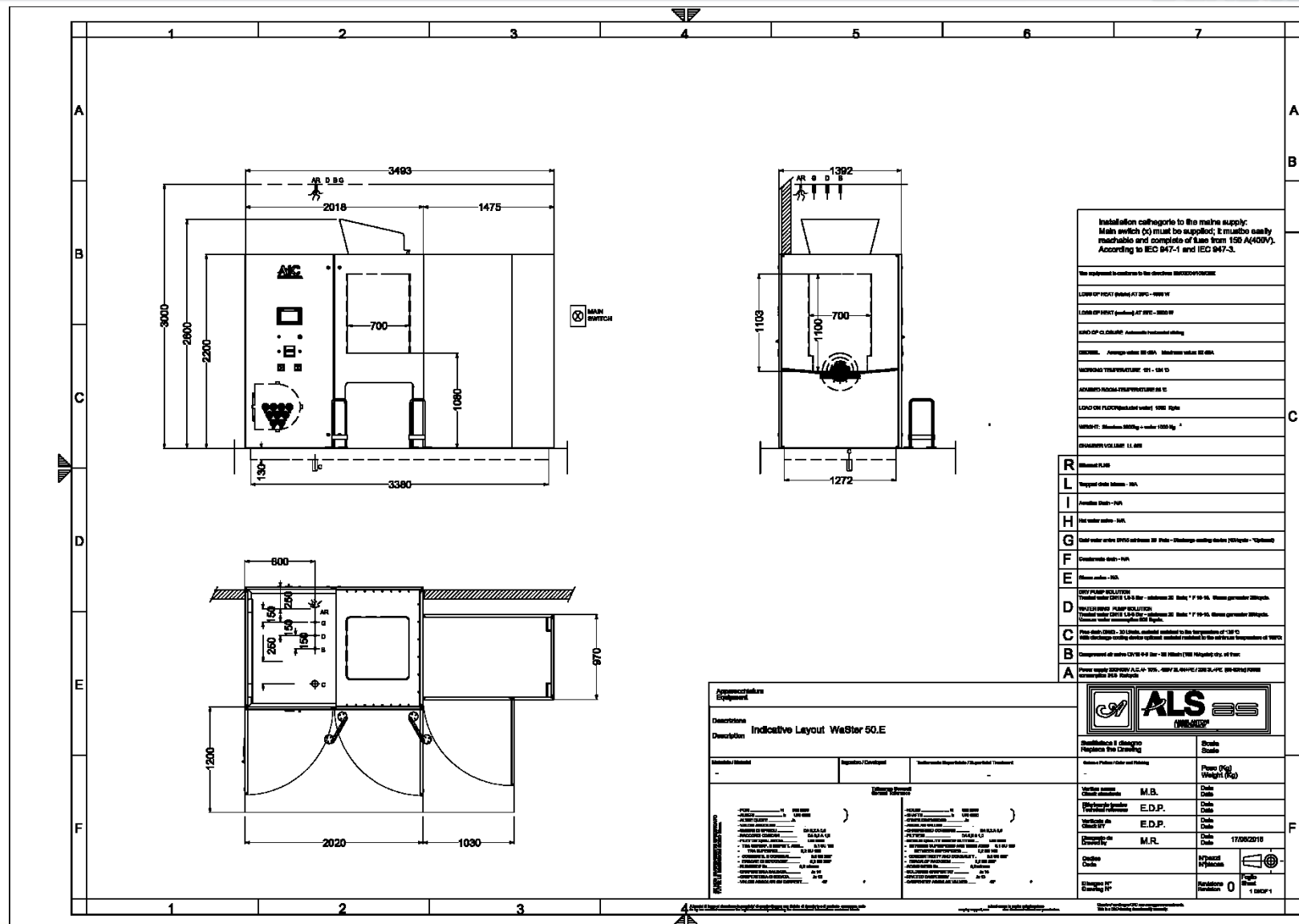


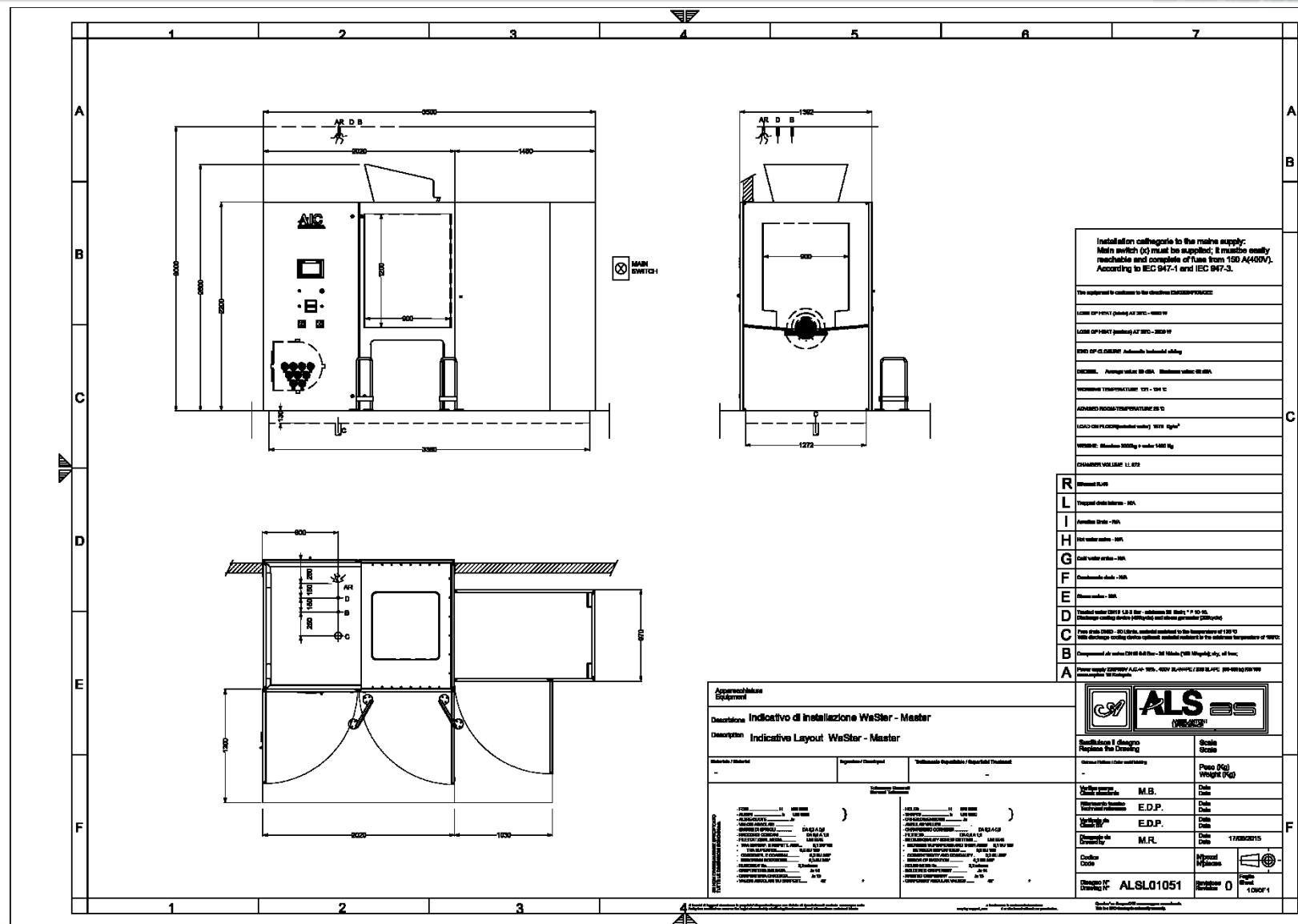
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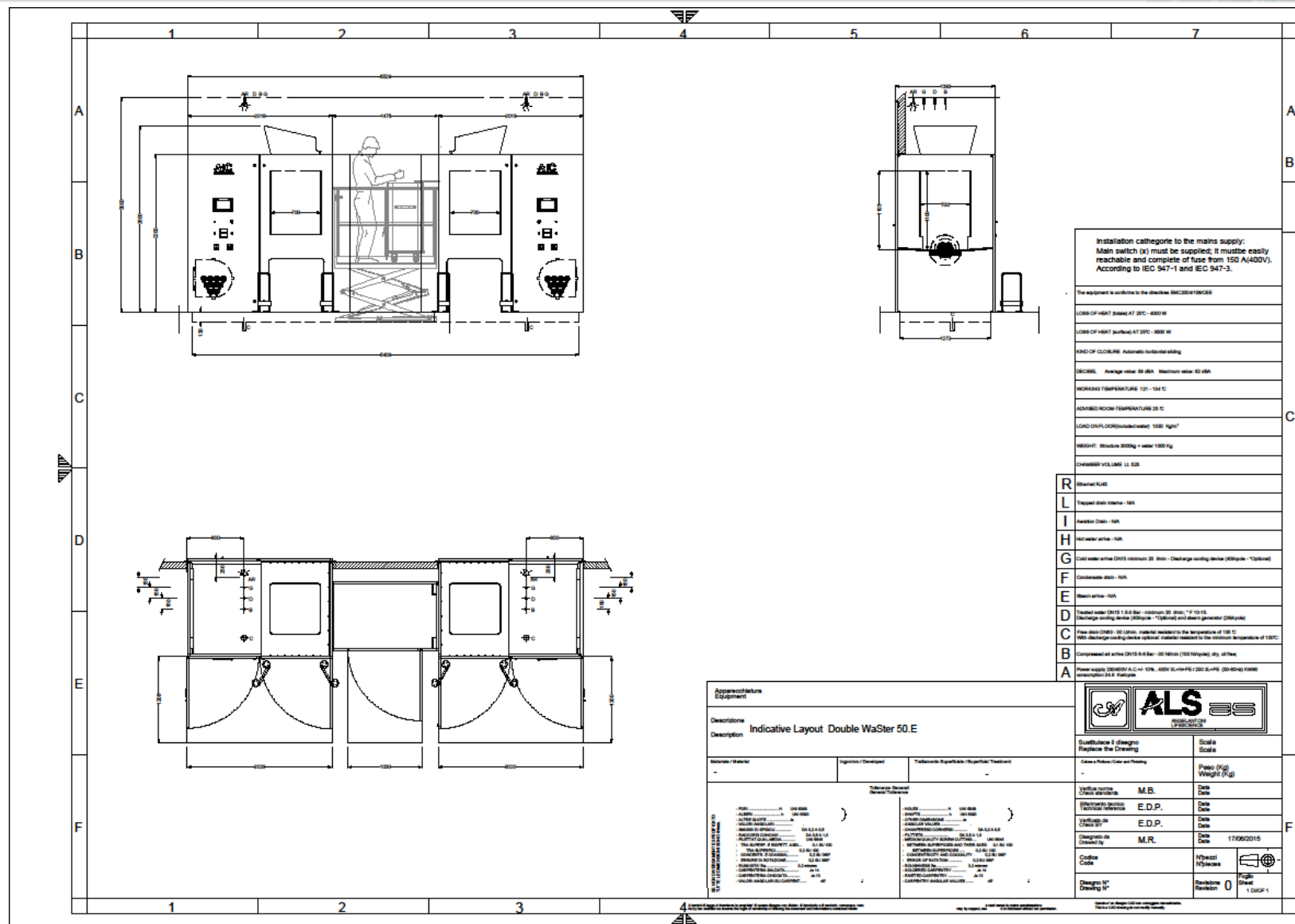
Installation layout WaSter 50

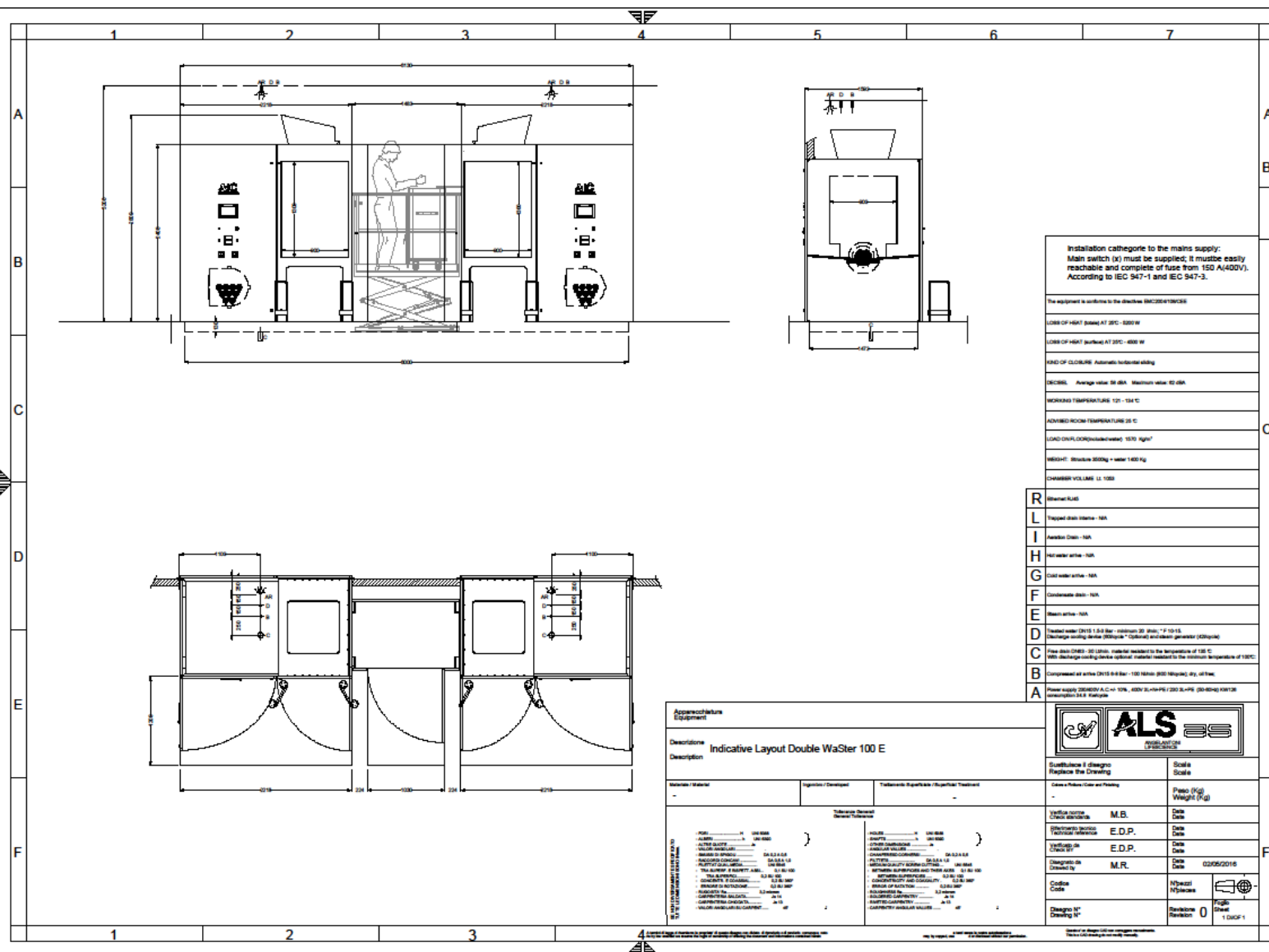


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