



Your **Safest** Choice



Before



After



CRYOGENIC DEFLSHING  
**MACHINE**

# About STMC

Showtop Techno-Machine Nanjing Co., Ltd.



Provincial Specialized Innovative Enterprise

National High-Tech Enterprise

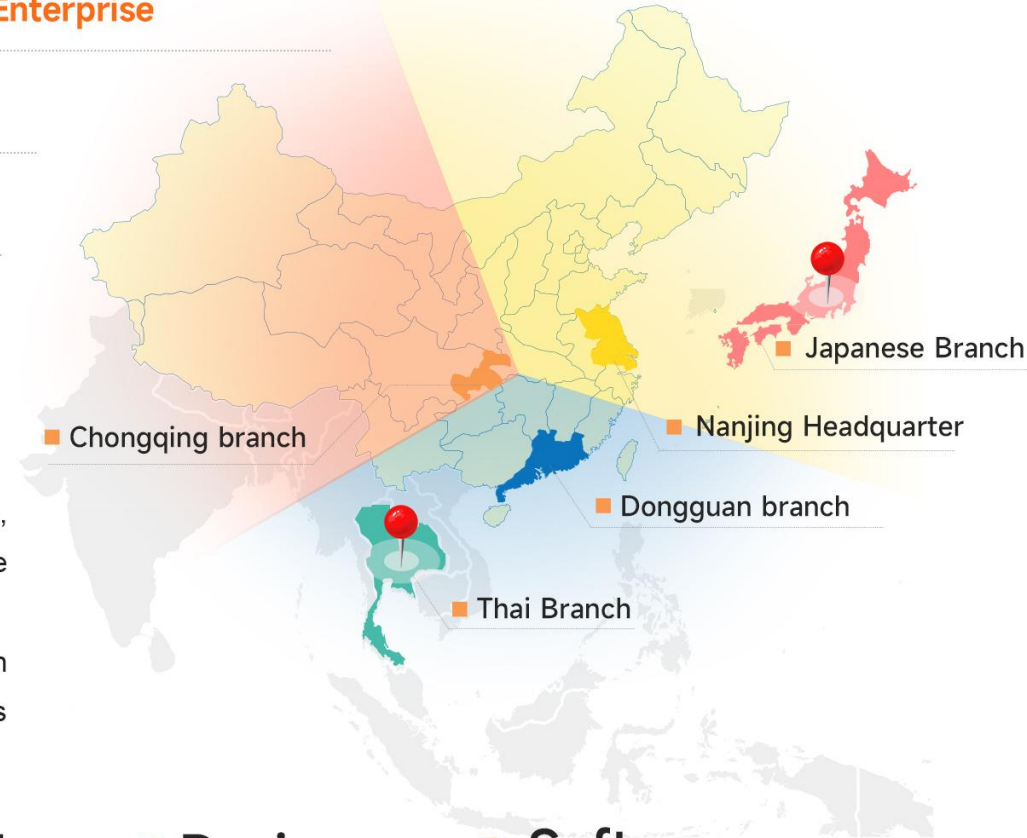
National Sci-Tech Enterprise

High-Tech S/M Enterprise

ISO 9000 & CE Certificate

Showtop Techno-Machine Nanjing Co., Ltd. is a national high-tech enterprise in China, specializing in the design, R&D, and manufacturing of cryogenic deflashing equipment. We provide high-quality, efficient, and cost-effective solutions for **rubber, plastic, elastomers, and zinc, magnesium, and aluminum alloy die-cast parts**.

In addition to equipment, STMC offers contract cryogenic deflashing services. Our headquarters is in Nanjing, with regional branches in Dongguan and Chongqing, and overseas offices in Japan and Thailand, serving customers worldwide with professional, one-stop deburring solutions.



**4** Registered  
Trademarks

**3** Invention  
Patents

**13** Utility Model  
Patents

**1** Design  
Patent

**6** Software  
Copyrights



1998

Jiangsu Zhongling Chemical Co., Ltd. was established.

2001

Became the exclusive agent of ULTRA SHOT cryogenic deflashing machines from Showa Denko Group.,Japan.



2004

Established China's first cryogenic deflashing OEM center.



2007

Joint venture with Showa Denko Group, STMC established.

Launched the first automatic jet-type cryogenic deflashing machine.



2008

Achieved ISO 9000 quality management certification.

2009

Dongguan branch established.

Launched the first self-developed touch-screen automatic deflashing machine.



2010

Chongqing branch established.

Nanjing new headquarter factory established.



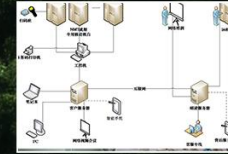
2015

Solely developed Double projectile wheel type cryogenic deflashing machine.



2021

Completed intelligent networking system upgrade.



2024

Released the 6th generation of cryogenic deflashing machines. Cumulative more than 20 patents.



2022

Recognized as a National High-Tech Enterprise, National Scientific and Technological Enterprise, National Innovative Enterprise, and a National Technology-Oriented Private Enterprise.



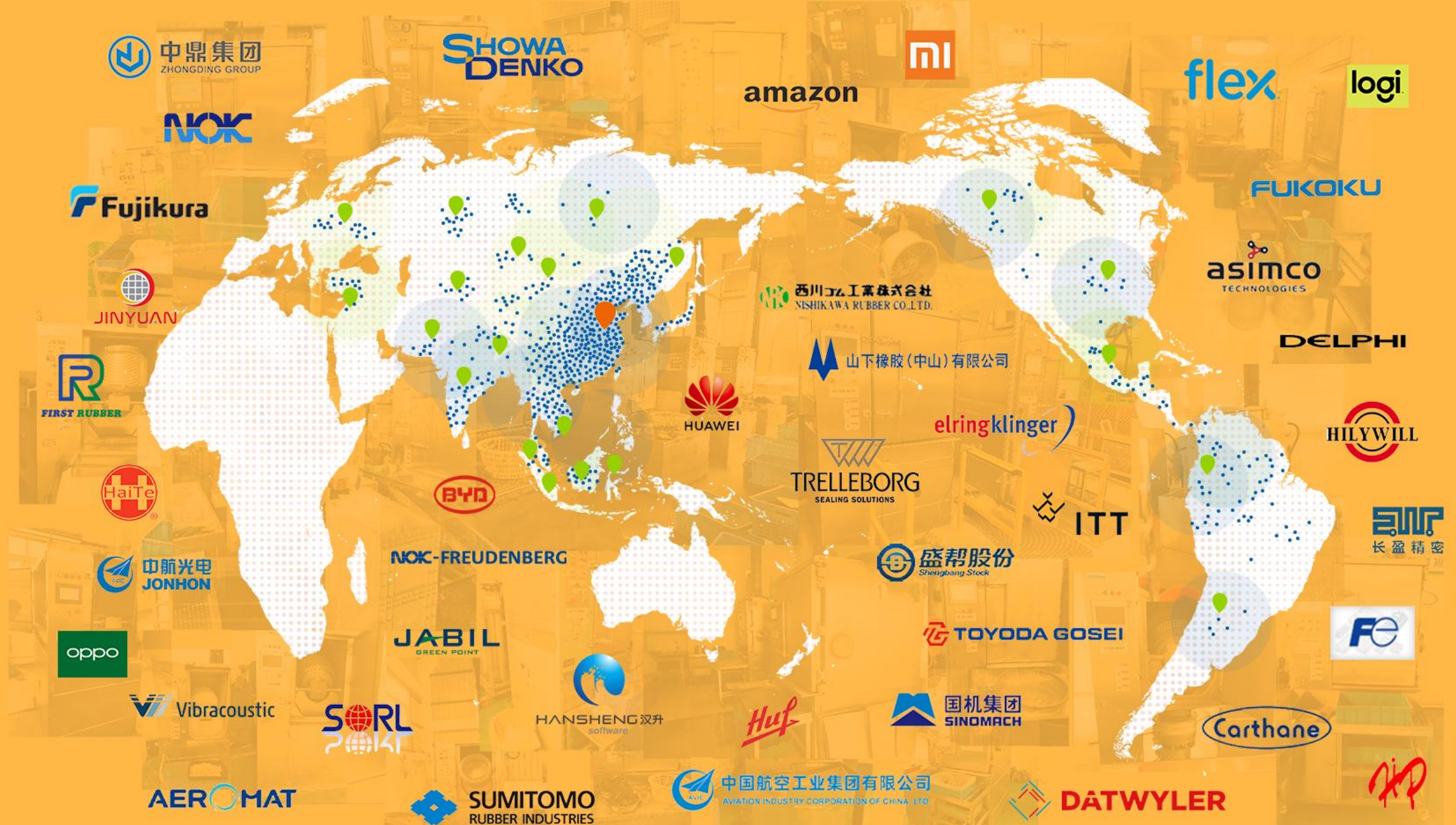
2025

Recognized as a Provincial Specialized and Innovative Enterprise.





# Our Customers





# Customer Site

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**15** years Japanese Joint  
Venture background

**23** years of industry experience  
and technology accumulation

**500+** Corporate Customers in **20+** countries.

High market Share & Repurchase Rate

**Forever Free**  
process verification service  
for all customers

Why is  
**Simc** your **Safest** choice

From production to delivery,  
every machine goes through  
**200+** inspections

**109** Ex-factory test

Meticulous Quality Assurance

Provides **50+** customized spec options

Solely supply core parts

**Made in & Import from Japan**

Better performance, better quality.

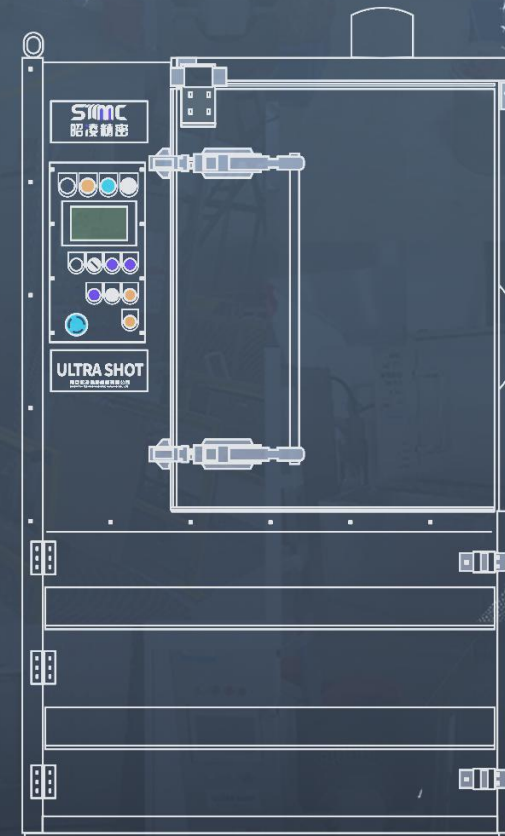
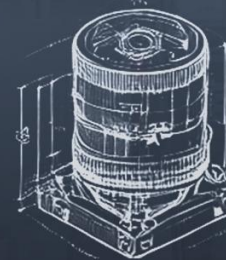
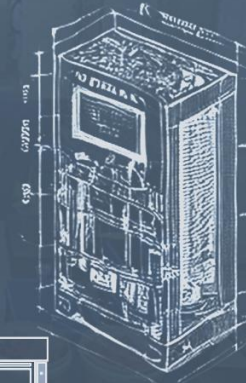
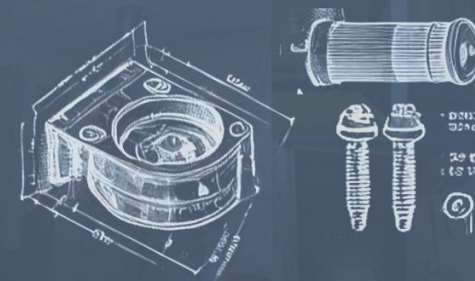
**24 x 7 x 365** Customer Service  
response within **10** minutes,  
Fault tracing within **2** hours,  
Solution provide within **4** hours.



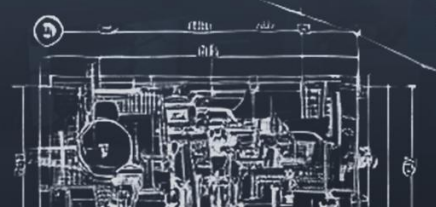
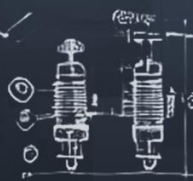
# ULTRA SHOT®

## CRYOGENIC DEFLASHING MACHINE

### SERIES



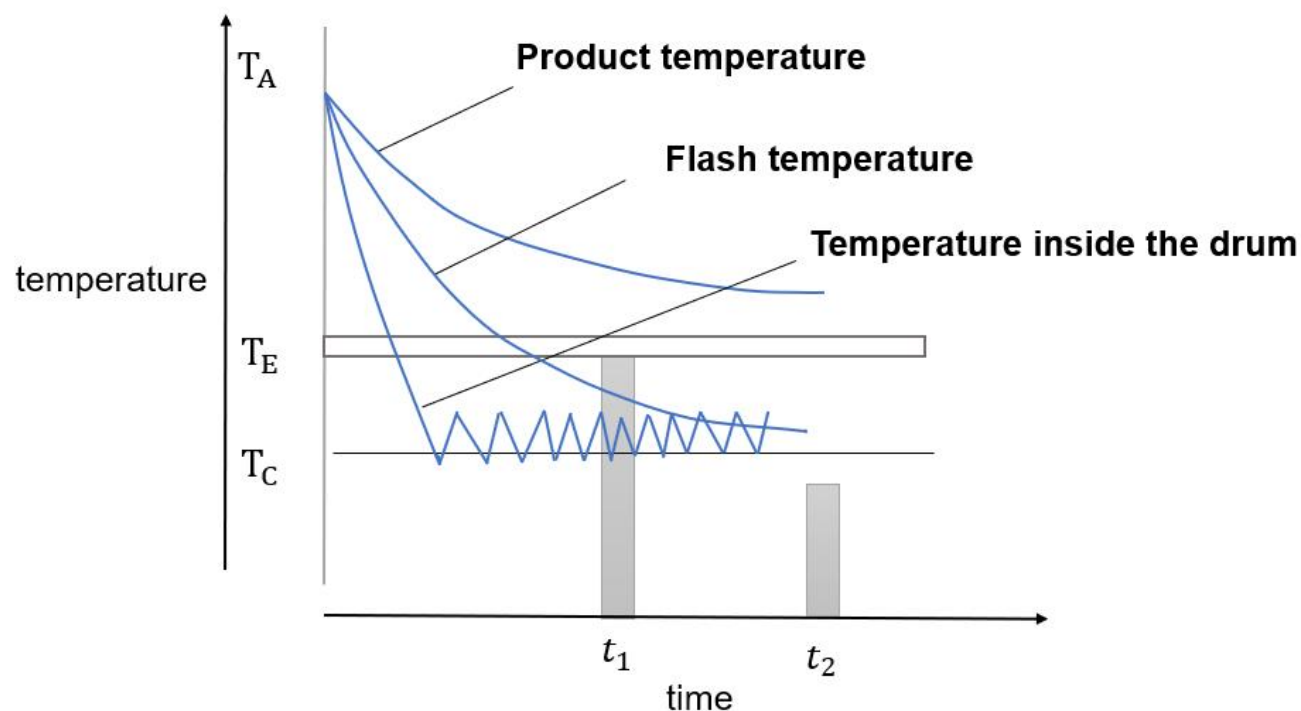
ULTRA SHOT





## Working Principle

Rubber, injection molding, and zinc magnesium aluminum alloy products will turn into a hardening, embrittlement state as the temperature decreases, and gradually lose their elasticity. Especially below the embrittlement temperature, even slight force is applied to the material will cause it to shatter. At low temperatures, the flash around the product will embrittle before the product itself. During the time when the flash embrittles and the product still has elasticity, high-speed spraying of special plastic pellets will impact the product, achieving the effect of removing the flash without damage the product .



$T_A$ : Feeding temperature

$T_E$ : Product embrittlement temperature

$T_C$ : Deflashing machine set temperature

$t_1$ : Time required for flash to start embrittlement

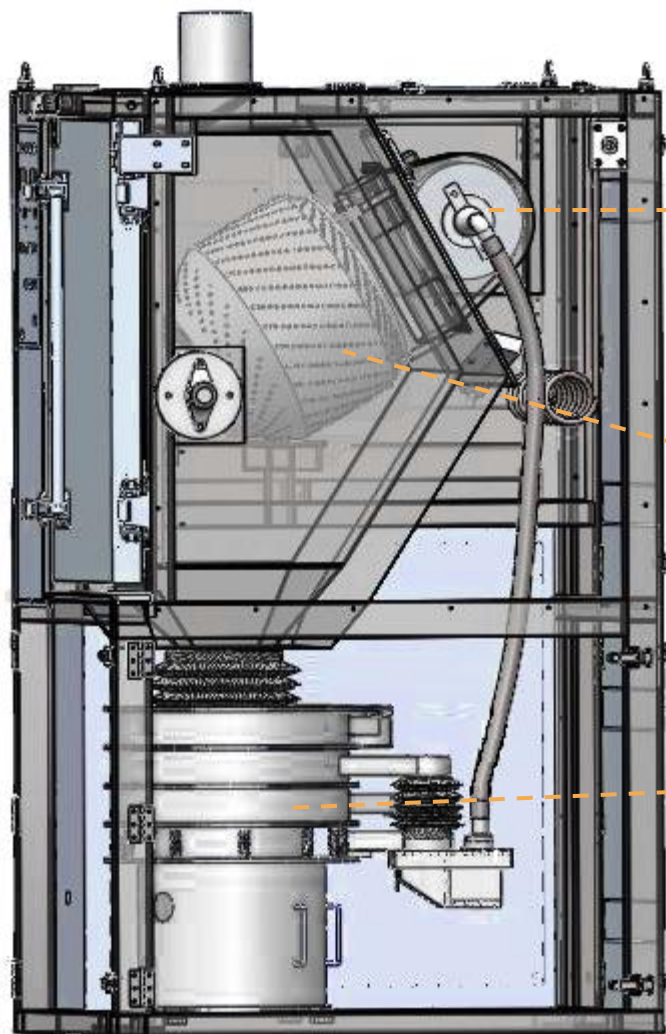
$t_2$ : Time required for product to start embrittlement

$\Delta t = t_1 - t_2$ : Time period for edge trimming processing



# Internal Structure

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## Dynamical System

- By  $\Phi$  250mm (Ultra Shot 60 Series) or  $\Phi$  Composed of 350mm (Ultra Shot 120 Series or Ultra Shot 160 series) aluminum alloy shot blasting wheels and imported original high-frequency motors, it effectively achieves a **1:1 stable ratio** of power output and product processing capacity.

## Temperature Control

- Using electronic temperature control components imported from Japan and imported insulation and soundproofing materials, **accurately ensuring temperature control and liquid nitrogen consumption during product processing, and reducing equipment operating noise.**

## Sorting System

- The machine applies Sato type anti-plugging, adjustable 3D variable linear waveform vibrating screen. **Quick and easy disassembly and maintenance, with excellent insulation performance; SUS304 stainless steel housing, long performance life with high stability.**



# Cryogenic Deflashing Machine Dynamical System

STMC exclusively provides core part options made in & imported from Japan



Exclusively developed for cryogenic deflashing

Aluminum alloy projectile wheel,  
With the original Japanese imported Hitachi  
high-frequency motor to form a power system

## Powertrain Features

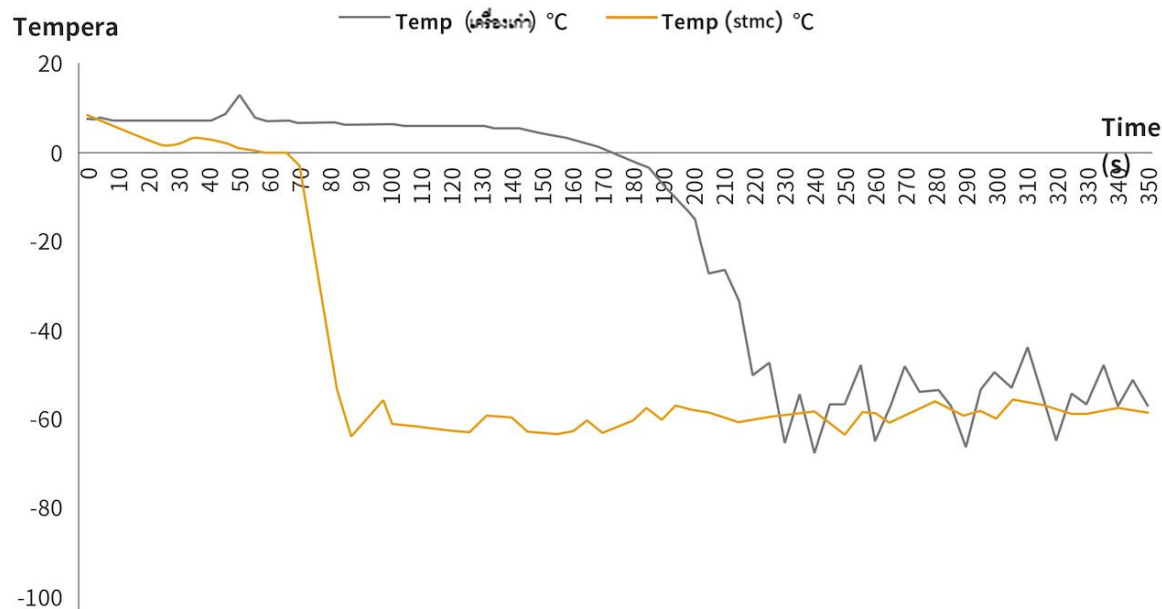


Hitachi high-frequency motors imported from Japan are designed and manufactured for use in ultra-low temperature environments for cryogenic deflashing. The whole motor adopts ultra-low temperature resistant special metal body, ultra-high magnetic attenuation resistance, ultra-long service life, high efficiency, stability and effective 1:1 stable ratio of power output and product processing capacity.



# Cryogenic Deflashing Machine Temperature Control System

Japanese original imported core components (whole unit import is standard configuration).



Sourced from STMC's client in Thailand

\*According to customer feedback from temperature control test reports, the cooling speed of STMC machine's temperature control system is 2.8 times faster than that of tested competitors, while its temperature variation is 75% narrower.

Uses imported brand-name temperature control parts and insulation

## Temperature Control System Features



- ①Precise temperature control during processing ensures zero product damage and complete burr removal.
- ②Superior insulation performance reduces liquid nitrogen consumption.
- ③Competitors typically use PUR insulation with poorer thermal conductivity. STMC exclusively uses imported PIRinsulation material with:

Density  $\geq 48\text{kg/m}^3$ ; Thermal conductivity  $\leq 0.021\text{ W/m}\cdot\text{K}$ ;  
20–30% lower liquid nitrogen consumption.



# Cryogenic Deflashing Machine Sorting System

STMC exclusively provides core part options made in & imported from Japan



**Adjustable 3D wave vibrating**

## Sorting System Features



- ① STMC Precision exclusive Japan original imported Sato vibrating separator. Adjustable 3D wave vibrating. Ultra-high and stable sorting efficiency to ensure the separation effect and projectile circulation rate.
- ② Disassembly and maintenance are simple and fast, and improve production efficiency.
- ③ High-quality sieve disc and shell, long service life and high stability
- ④ The closed shock-absorbing soft connection is made of special materials imported from Japan, which is highly waterproof, high frost resistance, high wear resistance and high sealing.



# Operating Software Interface

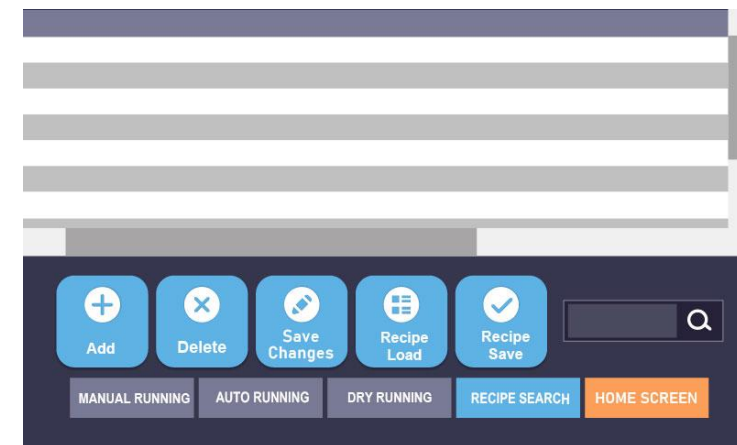
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Home Screen



Automatic Mode



Recipe Library



Utility Screen



Manual Operating Mode

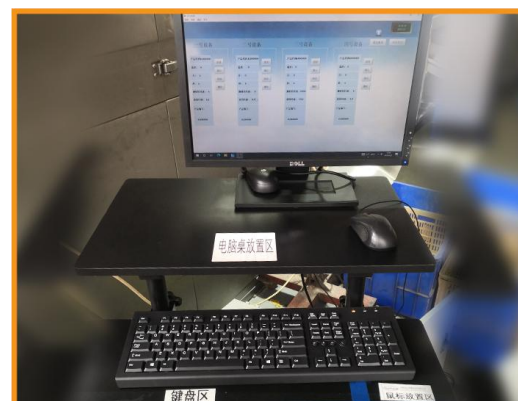


Operation Logs



# Industrial Control Configuration Option

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Industrial Control Computer

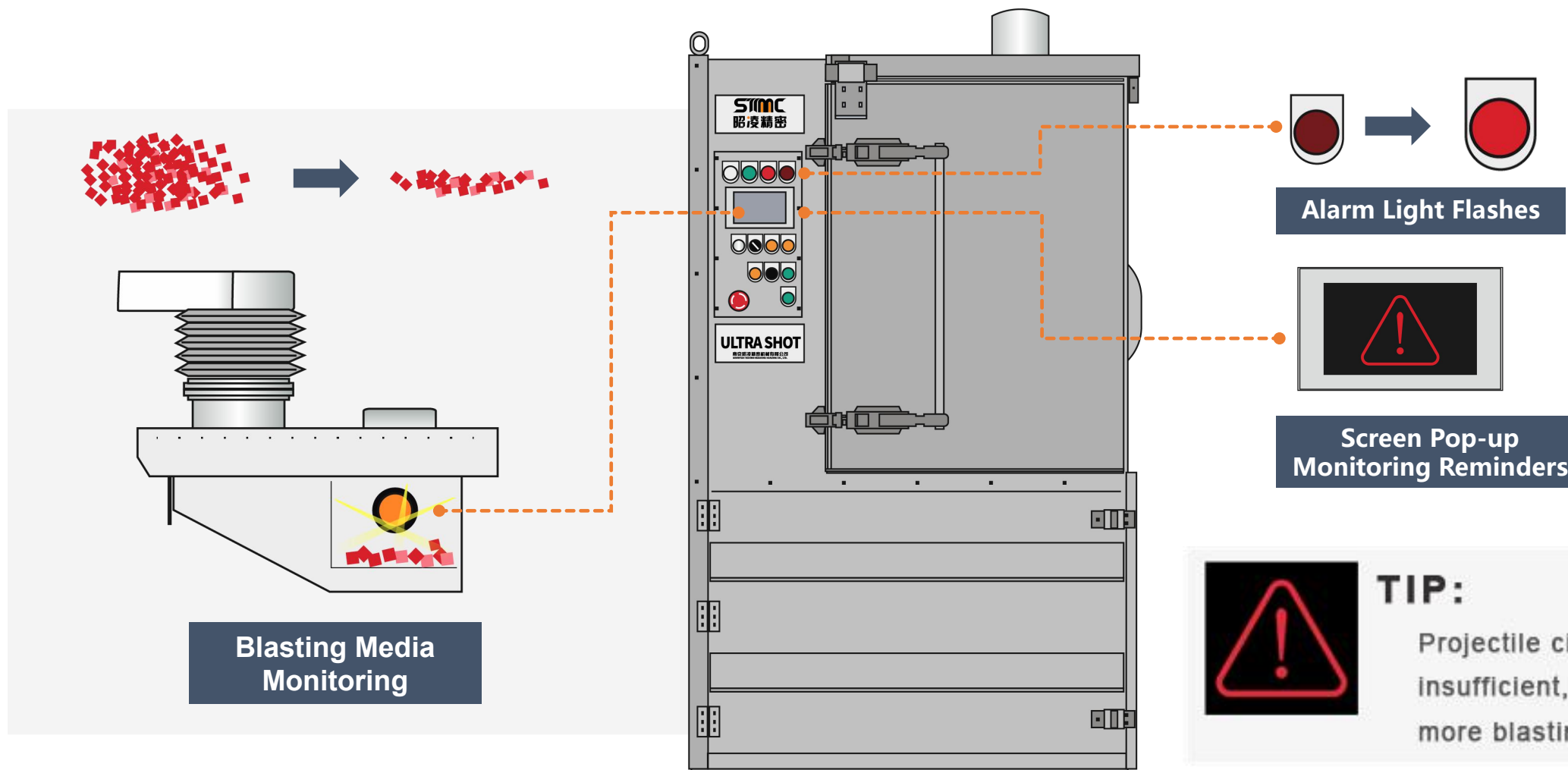


Barcode Scanner



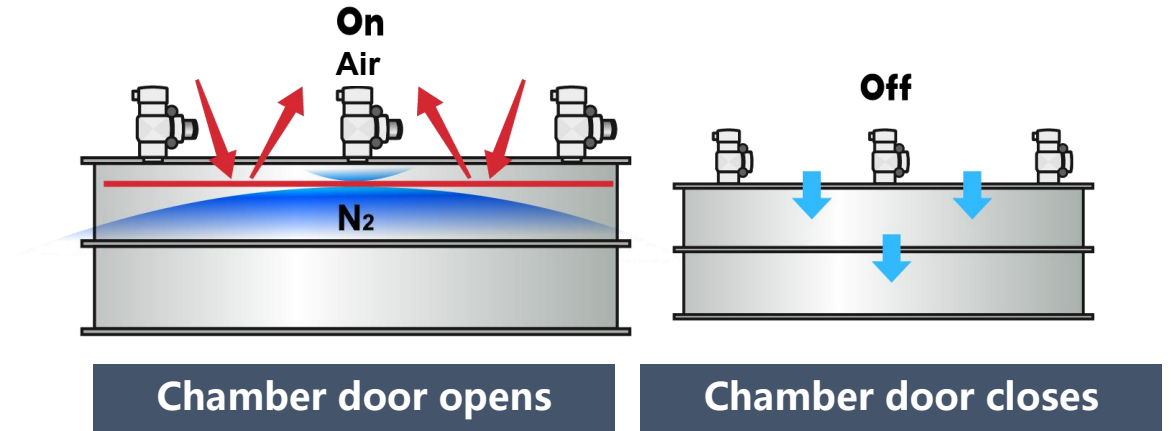
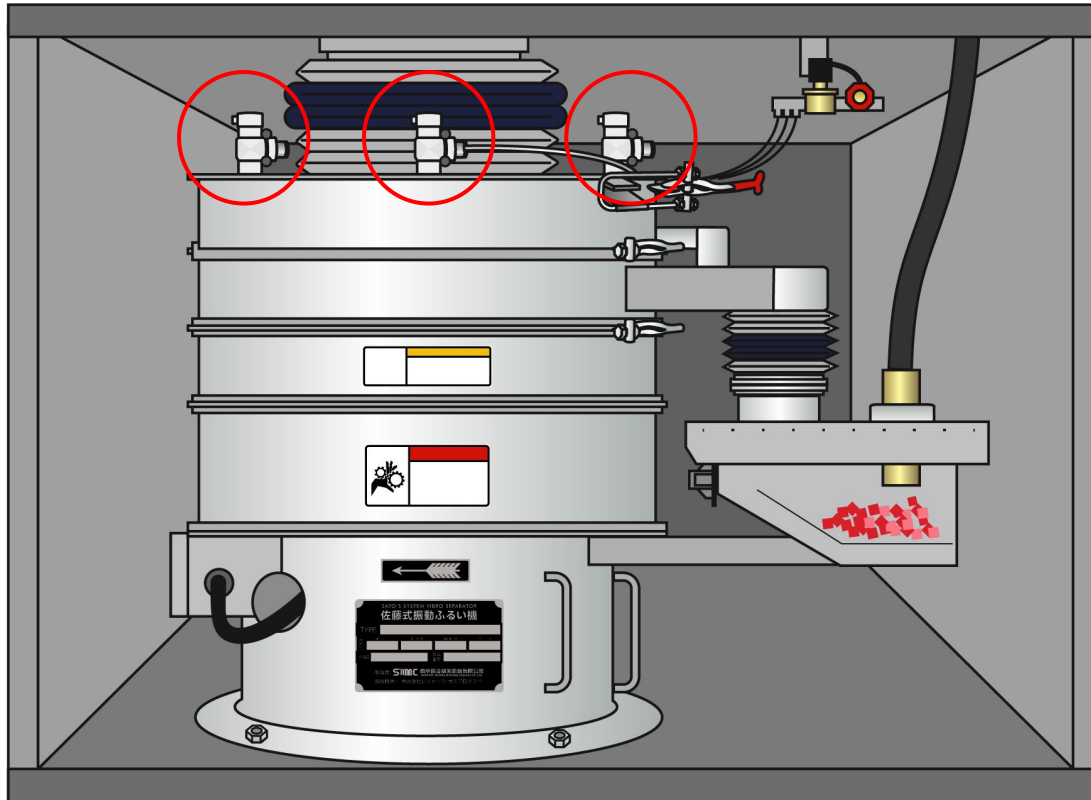
## Media Monitoring

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## Nitrogen Curtain

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When the chamber door of the machine is opened, nitrogen gas enters the first layer of the vibrating screen through the gas valve and automatically forms a gas curtain to block and isolate humid air, preventing the screen mesh from freezing.



# Ultra Shot 60 Series

Ultra high precision, 60L capacity, 7-inch touch screen, equipped with  $\phi 250$  aluminum alloy shot blasting wheels, the minimum processing temperature can reach  $-130^{\circ}\text{C}$



Ultra-high Precision

## Effect Comparison



Suitable for manufacturers with multiple varieties, small batches, and variable processing parameters.



Suitable for O-ring and injection molded products with high precision requirements, such as polyurethane U-shaped sealing rings and oil seals.



Taking the processing of **injection molded connectors** as an example, a NS-60 series cryogenic deflashing machine is introduced, which processes **32kg** per hour and manually processes about **1.5kg** per hour.

# Ultra Shot 120 Series

High precision, 120L large capacity, 10 inch touch screen, equipped with  $\Phi$  350 aluminum alloy shot blasting wheels suitable for manufacturers with fixed variety and mass production of product materials.



## Effect Comparison



Suitable for manufacturers with relatively fixed product specifications and mass production.



Suitable for most products, common seals, injection molded parts, and die-casting parts can be processed.



Taking **automotive rubber miscellaneous parts** as an example, a NS-120 cryogenic deflashing machine is introduced, which processes approximately **75kg** (approximately 3750 pieces) per hour and manually processes approximately **3kg** (approximately 150 pieces) per hour.

High Repurchase  
& Most Popular



# Ultra Shot 180 Series

160-180 liter ultra-large capacity, quick replacement basket plug and play, intelligent parameter setting, minimum processing temperature can reach -130° C.

## Effect Comparison



Suitable for manufacturers with large product sizes and mass production.



Suitable for large volume products, such as rubber toys, mouse shells, insoles, shock absorbers, etc.



Taking the **mouse shell** as an example, a NS-160 cryogenic deflashing machine is introduced, which processes about **288 pieces** per hour and manually processes about **45 pieces** per hour.

Extra-Large Loading  
& Production Capacity



# Explosion-proof MG Series

Special designed for Magnesium alloy products deflashing, equipped with an explosion-proof exhaust system, imported PIR insulation layer, and SUS304 shell, it has an ultra long service life and enhances the oxidation resistance and service life of the surface of die-casting parts.

Effect Comparison



Explosion-proof &  
Ultra-high Security



Simple operation and small footprint.



Automatic nitrogen injection system to make sure the oxygen level in chamber always below explosion limit.



The machine is anti-blast treated and equips safety pressure relief outlet at the top of the machine.



The machine compartment door is equipped with a pressure rod to resist the explosion impact.



This product has been **granted an invention patent authorization**, patent number: ZL 2021 1 1601026.8

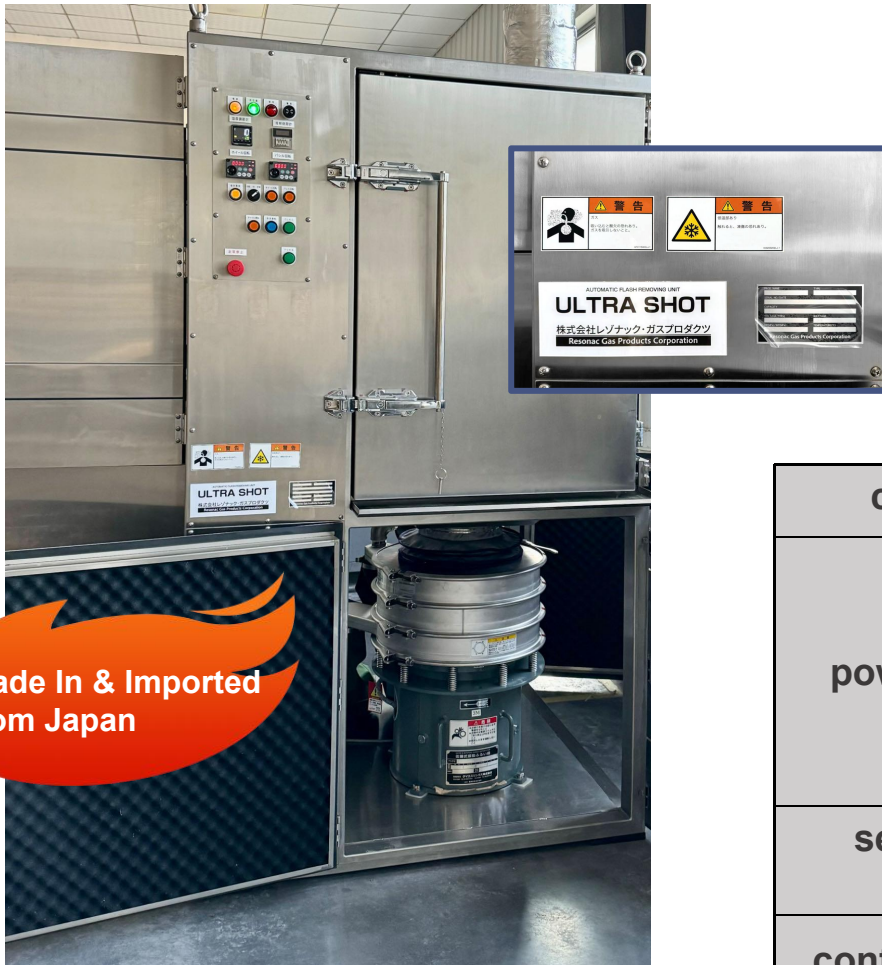
Attention: During the processing of magnesium castings, the oxygen content in the internal environment of the equipment must be less than 1.4%



# Cryogenic Deflashing Machine

## Made in Japan

We can offer the ULTRA SHOT cryogenic deflashing machine, imported directly from Japan. We ensure that the quality and performance of our machine adhere to the high standards set by the RESONAC Group.



Made In & Imported  
from Japan



The whole machine is original made in Japan.



Provide after-sales service by Zhaoling in accordance with RESONAC standards.

category	Component	Brand	category	Component	Brand
power device	High-speed variable frequency motor	HITACHI	electrical control device	Electrically heated door seal	RESONAC
	High-ratio gear reduction motor	NISSEI		Liquid nitrogen solenoid valve	ASCO
	Centrifugal wheel bearing	RESONAC		Accumulated timer	THEBEN
separation device	Sato-type 3D wave vibrating separator	KOEISANGYO		PLC	Mitsubishi
control method	Touchscreen	Fuji Electric		Frequency converter	Mitsubishi

## Cryogenic Deflashing Media or Blasting Media Use For Cryogenic Deflashing

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Producer	Japan	Europe (UK)	South Korea	China
Specifications(mm)	0.4, 0.5, 0.8, 1.0, 1.2, 1.5	0.4, 0.5, 0.75, 1.0, 1.2, 1.5	0.4, 0.5, 0.75, 1.0, 1.2 1.5	0.4, 0.5, 0.75, 1.0, 1.2, 1.5
Main Colors	White, Pink, Green	White, Clear, Red	White, Clear, Red	White
Quality Stability	5.0 ★★★★★	4.5 ★★★★★	4.0 ★★★★★	3.5 ★★★★★
Regularity	4.5 ★★★★★	4.0 ★★★★★	4.5 ★★★★★	3.5 ★★★★★
Wear Resistance	4.5 ★★★★★	4.0 ★★★★★	3.5 ★★★★★	3.0 ★★★★★
Anti-static	5.0 ★★★★★	4.0 ★★★★★	4.5 ★★★★★	3.5 ★★★★★
Application	High end product processing	Conventional product handling	Conventional product handling	Ordinary rubber parts

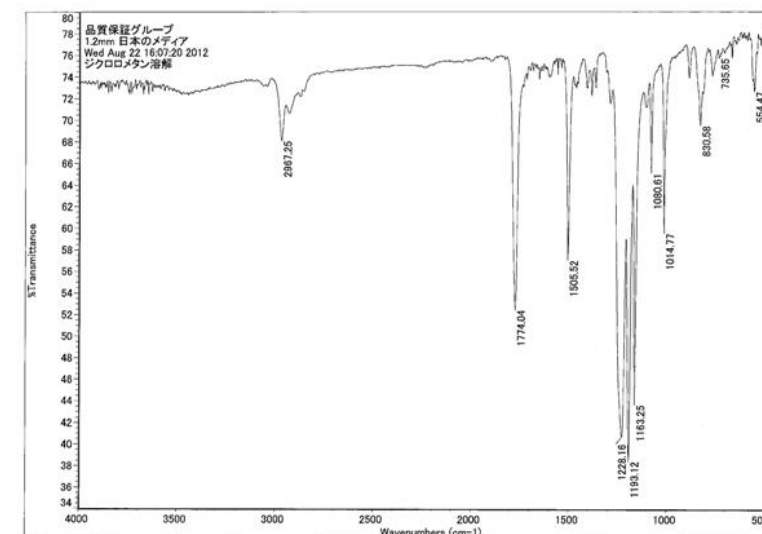
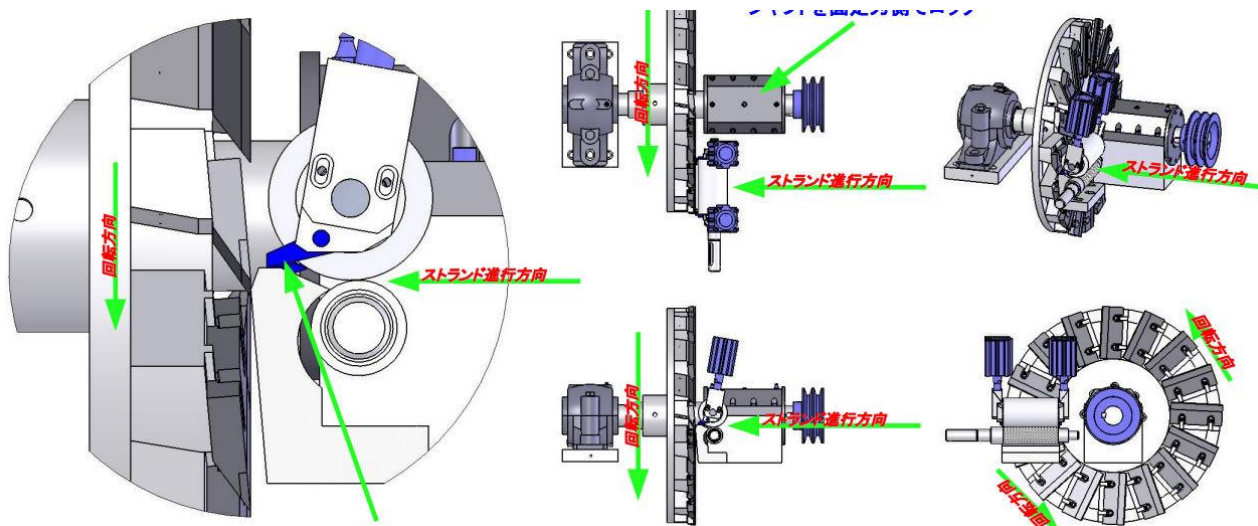


## Cryogenic deflashing media made in Japan

· Regular · Durable · Anti-static

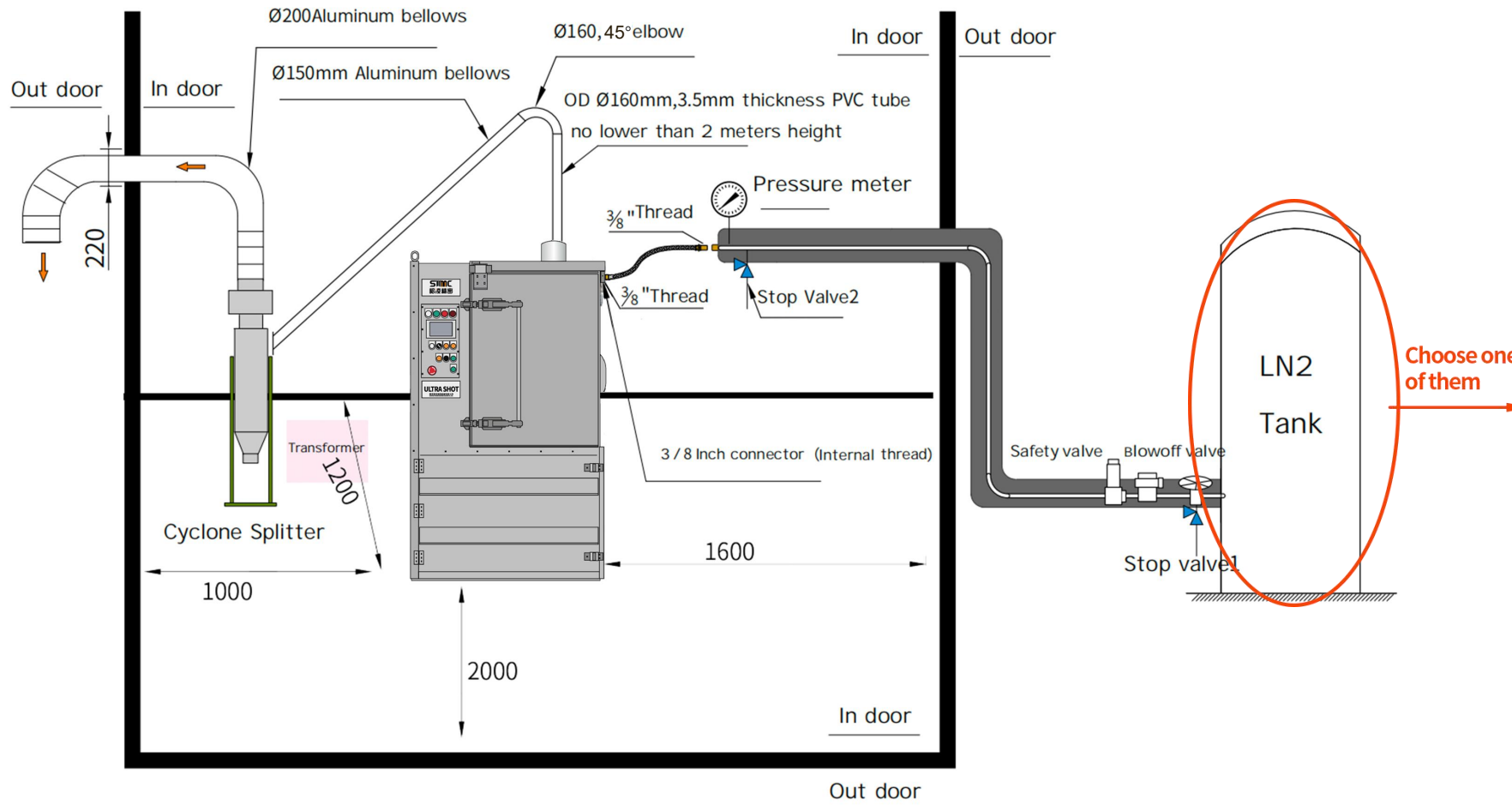
### Excellent regularity, precise cutting, and stable size

- Good wear resistance and long service life, compared with similar products on the market, it saves at least 20% in cost while still delivering excellent results.
- Excellent anti-static performance, reducing dust adsorption.
- Common specifications: 0.4 0.5 0.8 1.0 1.2 1.5mm.
- Colors include: white, green, pink.



# Cryogenic Deflashing Machine Consumables - Liquid Nitrogen

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Preferred Liquid  
Nitrogen Storage Tank

Volume  
10~20M<sup>3</sup>



Optional Low Temperature

Dewar

Volume  
210~450L



The background of the slide is an aerial photograph of a city skyline, likely Shanghai, featuring numerous skyscrapers and dense urban development. A semi-transparent blue overlay covers the top and left portions of the image. A diagonal orange banner cuts across the middle-right section, containing the title and a list of topics. The title is in large white font, and the list items are in smaller grey font.

# Application Of Cryogenic Deflashing Machine

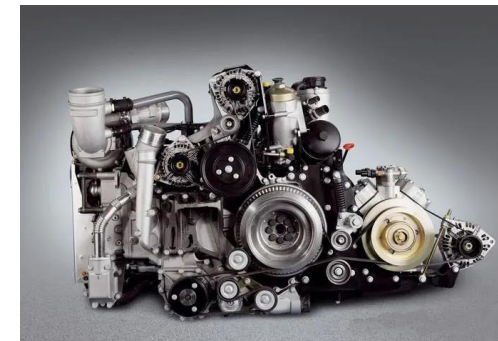
- Applicable Materials Of Cryogenic Deflashing
- Application Areas Of Cryogenic Deflashing



Electronic Precision Manufacturing



Intelligent Wearable



Automotive Precision Manufacturing



Aerospace Precision Manufacturing



Medical Equipment



Rubber Toys



Daily Office Supplies



Baby Products & Toys



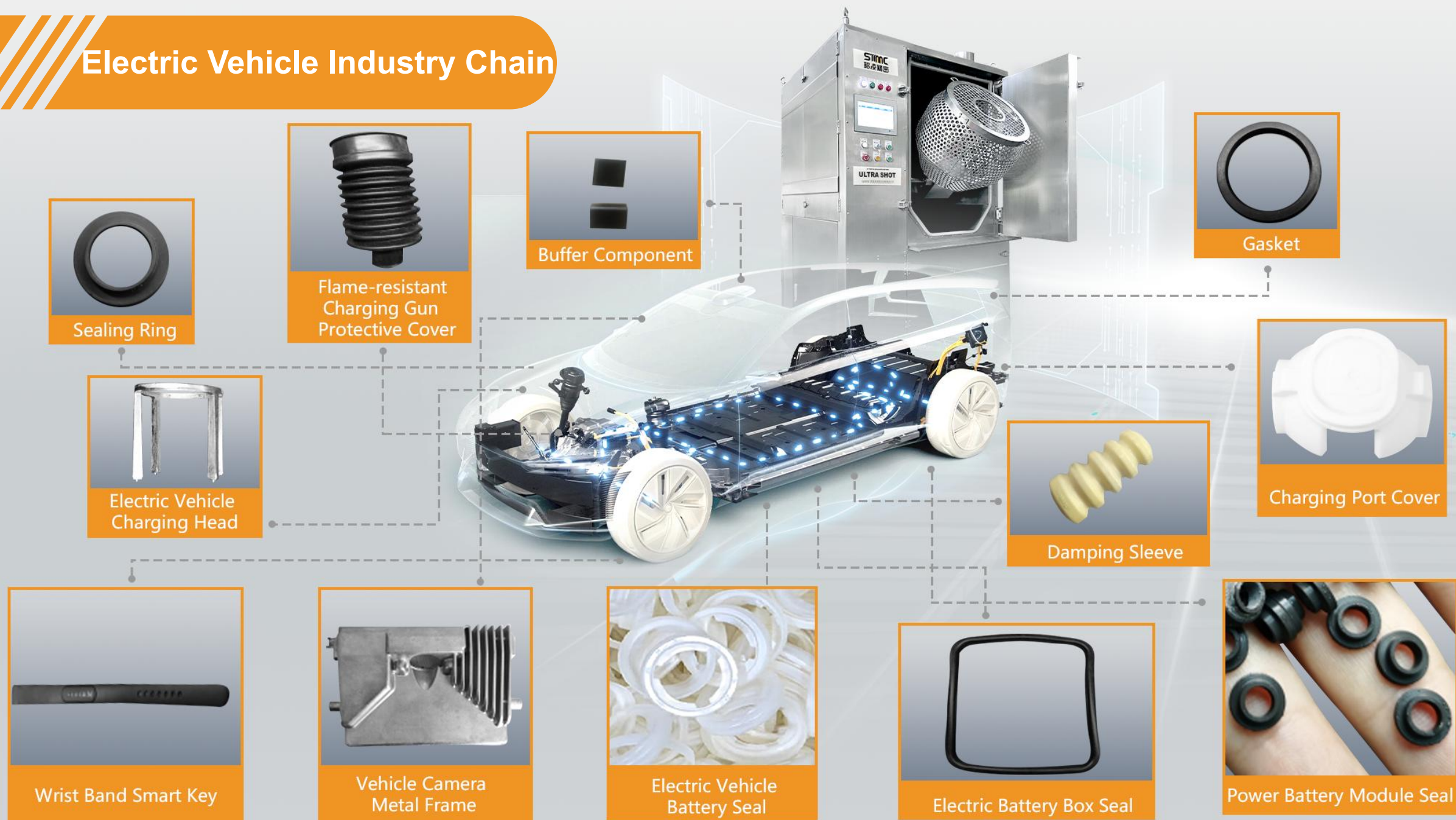
Household Appliances



Application  
Areas



# Electric Vehicle Industry Chain



# Application Areas Of Cryogenic Deflashing

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## Applicable Products & Materials Of Cryogenic Deflashing

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### Rubber

The cryogenic deflashing machine can process products made of Si, NBR, EPDM, NR, FKM, PUR, SBR, BR, CR, FPM and other rubber materials. The common ones are seal rings / O-rings, auto parts, rubber parts, rubber insoles, silicone products, etc.



### Injection Molding

The cryogenic deflashing machine can process products made of PA, PBT and PPS. The common ones are connectors, nanoforming structural parts, medical use injection parts, automotive injection parts, mobile phone cases, mouse cases, injection molding miscellaneous parts, etc.; also products made of TPU and TPE elastic material, such as watch bands, wristbands, soft sleeves, plastic cases, etc.



### Zinc Magnesium Aluminum Die-casting

The cryogenic deflashing machine can process aluminum, zinc, magnesium alloy products. The common ones are auto parts, metal crafts, decoration items, toy parts and etc.



## Services & Solution

- OEM Service
- Process Test
- Machine Lease
- Renovation And Overhaul
- Machine Upgrades



# OEM Service

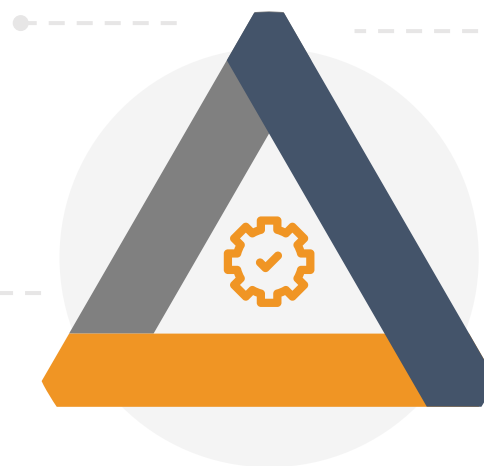
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## Business Scope

Rubber, injection parts, elastic materials, zinc magnesium aluminum alloy metal die-casting parts and other products.

## Business Process

Product testing -> Quotation (quality + commercial) -> Contract-> Implementation.



## Management Standard

Processize, standardize, traceable.

## Service Locations

Nanjing China, Chongqing China, Dongguan China.



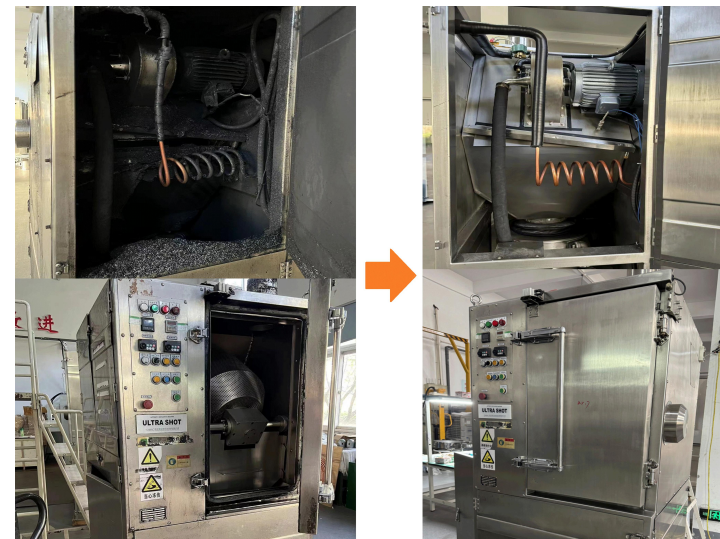


## Process Test



- **Test purpose:** To verify whether the cryogenic deflashing process is applicable, if the mold needs to be adjusted, measure and calculate the effect, cost, capacity, pass rate, and conduct data analysis.
- **Process:** Appointment - Test Plan - Parameter Verification - Capacity Test - Stability Test.
- **Test report:** Optimal Quality| Optimal Cost| Full Analysis.

## Renovation And Overhaul



- **Contents:** Including repair of insulation layer, machine frame refurbishment, motor replacement, electrical control cabinet replace and repair, etc.
- **Effect:** The old machine with failure or poor performance can be put into use again, thereby increasing the utilization value of machine and reducing the production and manufacturing costs.

## Machine Lease/Rental



- **Suitable clients:** When there are a large number of production orders in the short term that urgently need to increase production capacity, but it is uncertain whether they will remain stable in the long term, or when the delivery time of newly purchased equipment cannot meet the urgent need for increased production capacity, leasing can be chosen instead of purchasing. According to the process requirements and rental schedule, add customer service to understand the quotation.

## Machine Upgrade And Customization



- **Regular upgrade:** Button control changes to touch screen control, code scan function adding, replace parts for performance improvement, etc.;
- **Intelligent remodeling:** Combine with client's MES system, when MES forwards production order, the machine can automatically retrieve the process parameters, and automatically send the production record to the system after the completion of production.



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[www.showtan-tech.com](http://www.showtan-tech.com) (CHN)

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Company Website



Wechat Service

