



ULTRA SHOT® Cryogenic Deflashing Machine Series



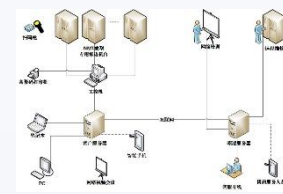
About STMC

Showtop Techno-Machine Nanjing Co., Ltd.

Showtop Techno-Machine Nanjing Co., Ltd. is a Chinese national high-tech enterprise. We specialize in the design, research & development, and manufacturing of low-temperature surface treatment technology equipment. To provide high-quality, efficient, high-precision, and low-cost edge trimming equipment and customized solutions for customers who produce rubber, injection molding (including elastomer materials), zinc magnesium aluminum alloy die-casting parts, and other materials, and to provide one-stop comprehensive services. At the same time, we provide processing services for incoming frozen edge trimming. STMC has its global headquarter in Nanjing, China, south region subsidiary in Dongguan, West region subsidiary in Chongqing , oversea branches in Japan and Thailand, committed to serving clients around the world.



Company History



STMC completed the intelligent networking upgrade project of multiple cryogenic deflashing machines.

The double projectile wheel cryogenic deflashing machine solely developed by STMC has been successfully built and patented.

The first self-developed touch-screen automatic cryogenic deflashing machine model NS-60T was launched.



Jiangsu Zhongling Chemical Co., Ltd. and Showa Carbonate Co., Ltd. Co-founded a joint venture company, based on the technology provided from Showa Electric Gas, the first automatic jet cryogenic deflashing machine was produced.



2021 2022

Strategic cooperation agreement reached with Showa Carbonate Co., Ltd. Japan. The same year, STMC acknowledged as **National high-tech enterprise**; **National scientific and technology enterprise national innovative enterprise**, and **Jiangsu scientific and technology private enterprise**.



2015

2011

Chongqing branch was established, Nanjing company moved to Yongning Industrial Concentration Zone, Pukou District.



2009

Certified by the **ISO 9000 quality management system** of the China Quality Certification Center.



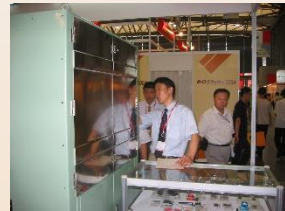
2008

2007

Cooperate with Japan Showa Carbonate Co., Ltd., set up the **first cryogenic deflashing service center** in China.



2004



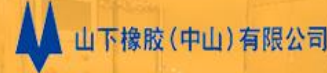
2001

Jiangsu Zhongling Chemical Co., Ltd. was **established**.

1998



Our Clients



Choose STMC

Brand Origins

Originated from Japan's Showadenko Group 30 years of technology precipitation, 16 years of domestic manufacturing experience. Far surpassing other manufacturers in the same field.

Mature Technical Solution

The ejection speed, ejection angle, shape of the part basket, inclination angle, and rotation can be optimized through design and calculation to achieve the optimal ratio.



High Configuration Core Parts

The default core components are imported from Japan which have better performance and quality, they can also be replaced if German configuration is preferred, including Siemens motors (optional), frequency converter, PLC and touch screen.

Full Service

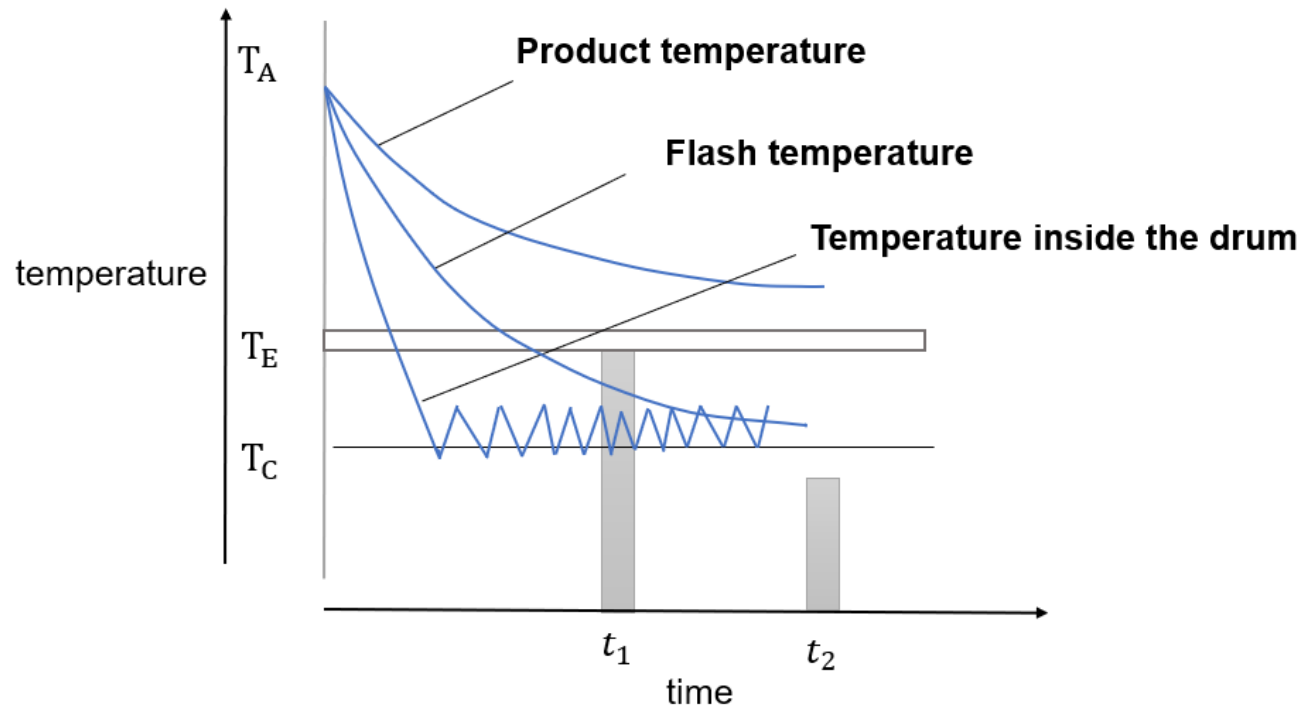
Free pre-sales test and provide test report (including molding adjustment suggestions), provide the best technical solution, 1 year (up to 2000 hours) warranty, spare parts guarantee supply for 10 years, remote response in less than 2 hours, 48 hours on-site service, 4 return visits per year.

ULTRA SHOT[®] Cryogenic Deflashing Machine



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

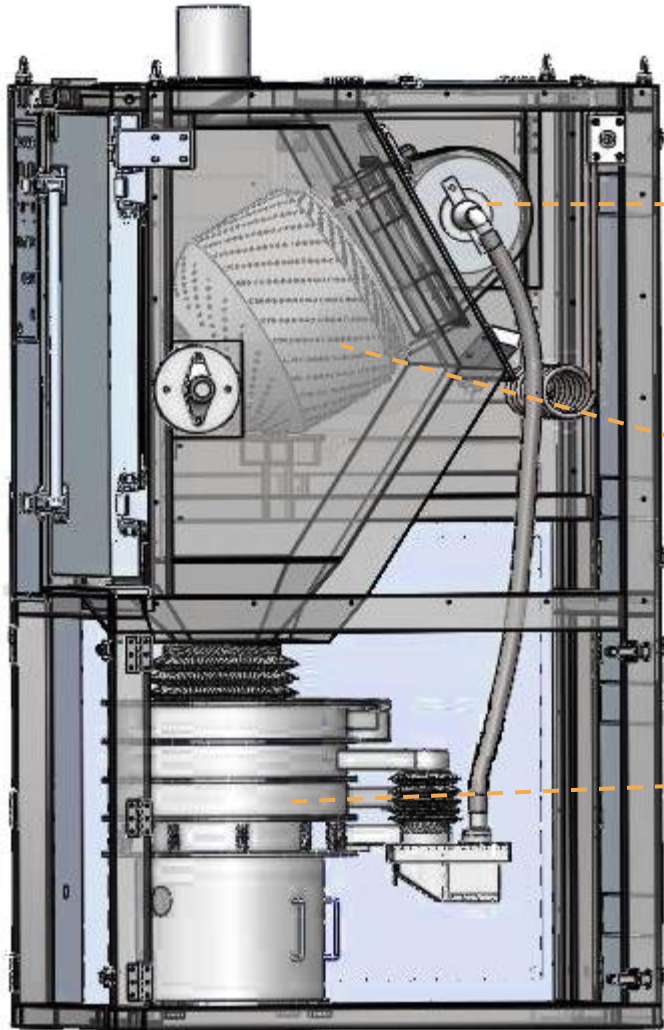
T_C :Deflashing machine set temperature

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



Dynamical System

- By Φ 250mm (Ultra Shot 60 Series) or Φ 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.**

Ultra Shot 60 Series

Ultra high precision, 60L capacity, Can be equipped with a 7-inch touch screen, equipped with $\phi 250$ aluminum alloy shot blasting wheels, the minimum processing temperature can reach -130°C



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 Φ 350 aluminum alloy shot blasting wheels suitable for manufacturers with fixed variety and mass production of product materials.



Effect Comparison



Suitable for mass production, fewer varieties and high requirements of product surface treatment accuracy of the enterprise.



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.

Ultra Shot 160 Series

160L super large capacity, quick replacement basket plug and play, intelligent parameter setting, suitable for manufacturers of large products, such as insoles, shock absorbers, etc



Effect Comparison



Suitable for manufacturers with larger product sizes.



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.

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



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.



The whole machine is original made in Japan. Inspected according to Japanese RESONAC standards before leaving the factory.



The core components are all manufactured locally in Japan.



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



The best choice for supporting manufacturers in industries such as automobiles, military industry, and high-end electronic products.

Cryogenic Deflashing Media or Blasting Media Use For Cryogenic Deflashing



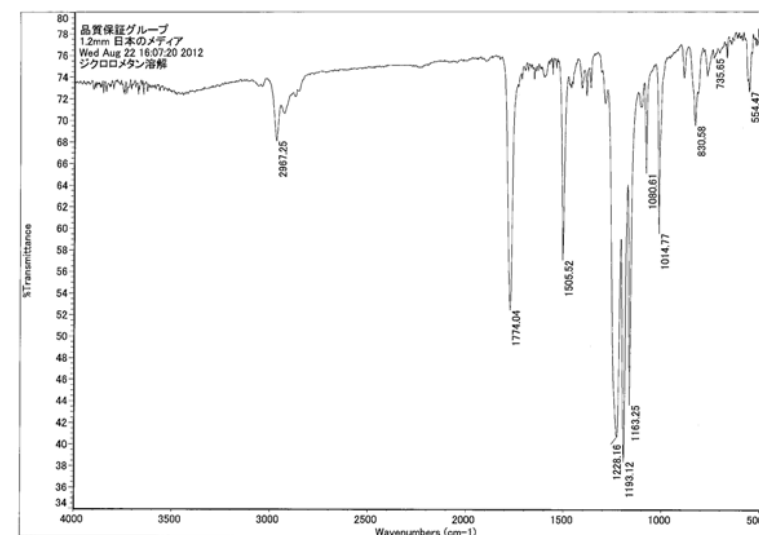
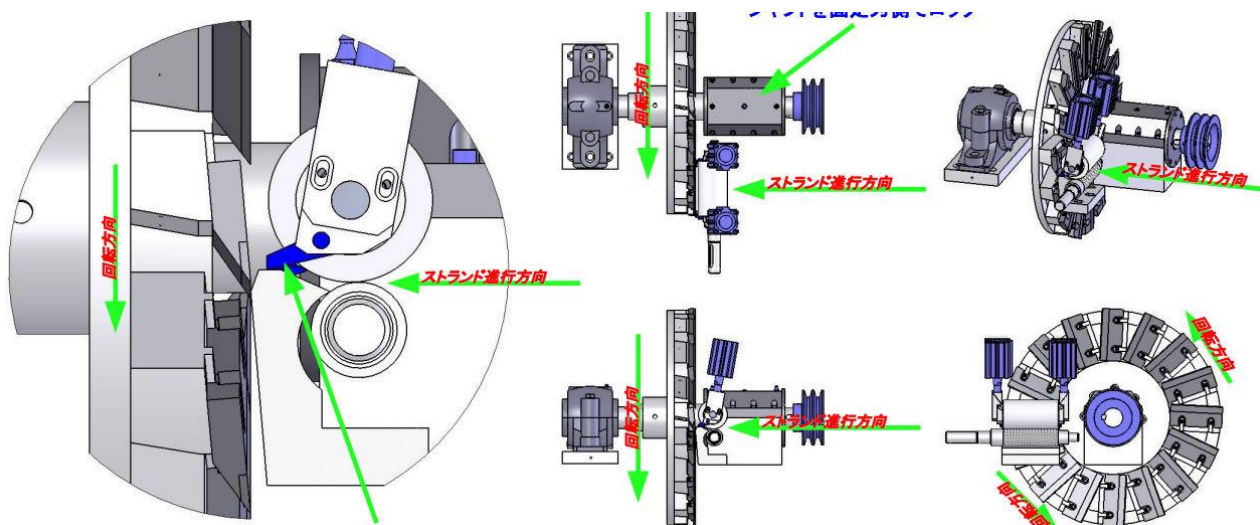
Producer	Japan	Europe (UK)	South Korea	China
Specifications(mm)	0.4, 0.5, 0.8, 1.0, 1.2, 1.5	0.4, 0.5, 0.75, 1.0, 1.2, 1.5	0.4, 0.5, 0.75, 1.0, 1.2 1.5	0.4, 0.5, 0.75, 1.0, 1.2, 1.5
Main Colors	White, Pink, Green	White, Clear, Red	White, Clear, Red	White
Quality Stability	5.0 ★★★★★	4.5 ★★★★★	4.0 ★★★★★	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

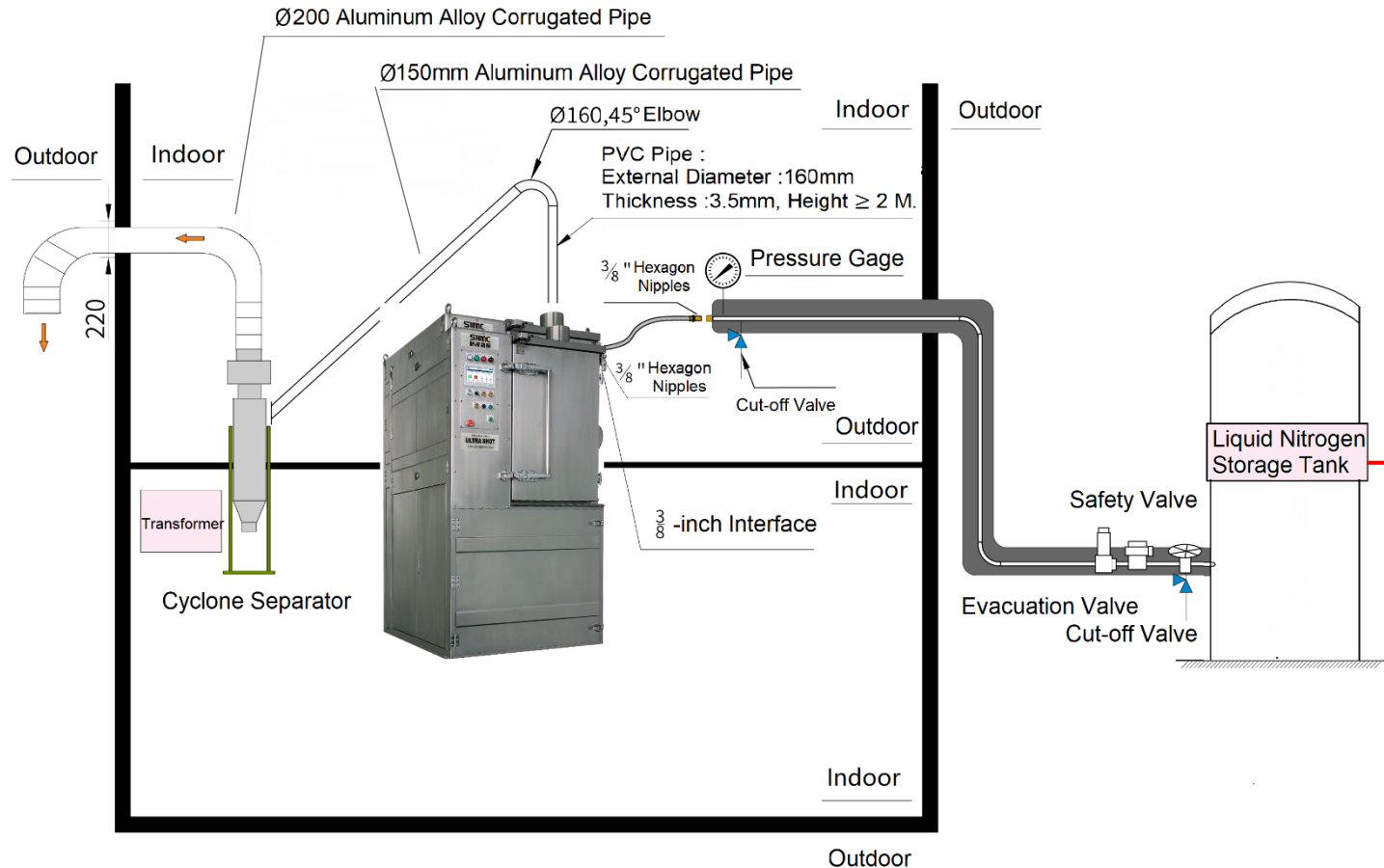
- Regular · Durable · Anti-static

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



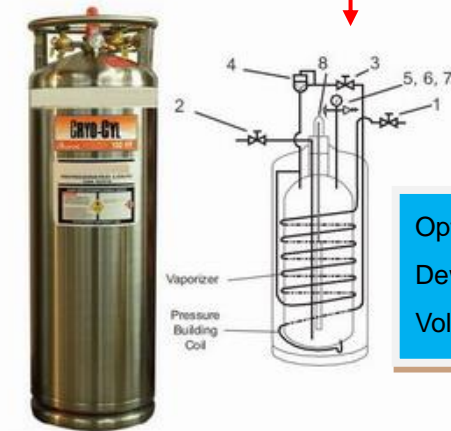
Installation Precautions

- 1 It is recommended to use a vacuum pipeline that does not exceed ten meters, with an inner diameter of DN15 or greater.
- 2 If it is a stainless steel pipe, it is recommended not to exceed 8 meters. Polyurethane material should be used for insulation, and the insulation thickness and outer diameter should be greater than 300mm. (Using ordinary pipelines can cause slow cooling speed and high consumption of liquid nitrogen, among other drawbacks)
- 3 All reserved space sizes are recommended, and if possible, the reserved space size should be as large as possible.
- 4 The height of the liquid nitrogen outlet shall not be less than 2200mm.
- 5 If you have any questions, please contact our company.



Preferred Liquid Nitrogen Storage Tank
Volume: 10~20M³

Choose one of them



Optional Low Temperature Dewar Can
Volume : 210~450L



Application Of Cryogenic Deflashing Machine

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

Applicable Materials Of Cryogenic Deflashing

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.



Application Areas Of Cryogenic Deflashing

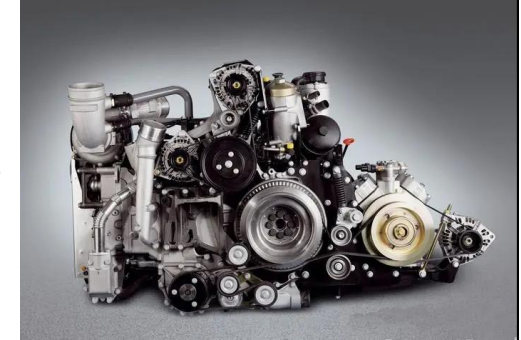




Electronic Precision Manufacturing



Intelligent Wearable



Automotive Precision Manufacturing



Aerospace Precision Manufacturing



**Application
Areas**



Medical Equipment



Rubber Toys



Daily Office Supplies



Baby Products & Toys



Household Appliances



Services & Solution

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

OEM Service

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.

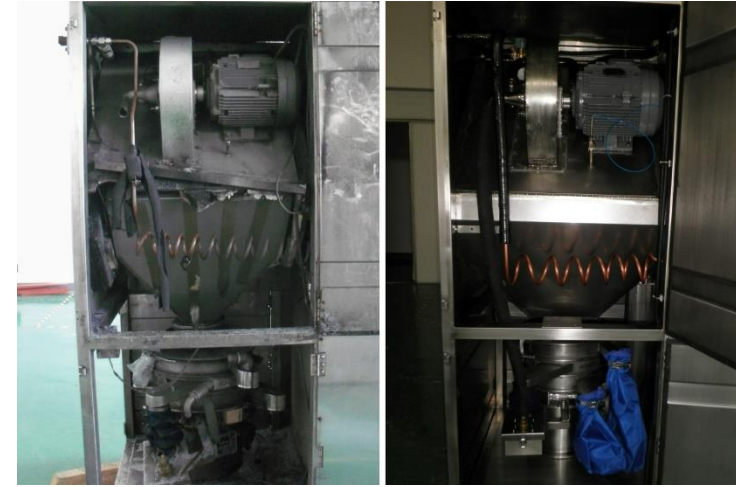


Process Test



- **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.

Thank you for choosing STMC

URL: www.showtop-tech.com (ENG)

www.showtan-tech.com (CHN)

TEL: 400-0500-969

E-mail: marketing@stmc.group



Company Website



Wechat Service