



# Cryogenic Deflashing Machine Shot



Made In  
India



CE  
Certified



Highly  
Efficient



Hotspot  
connectivity

Liquid Nitrogen  
Special grade Cryogenic Deflashing Media

Rubber | Plastic | Metal – Zinc, Aluminum,  
non ferrous alloys

**ULAI ENTERPRISES PRIVATE LIMITED**



## CRYOGENIC DEFLASHING

The process uses liquid nitrogen, barrel rotation, shot blasting and media in varying combinations to remove the flashes in a highly precise, cost effective and efficient manner

The cryogenic deflashing machine uses liquid nitrogen to help the 'flash part' reach a low enough temperature where its material becomes brittle. This stage is also called as 'glass transition stage' or GTS. During this process, the stainless steel barrel rotates at defined input speed and once the material reaches a brittle stage, a unique high speed impeller directs deflashing media on the parts with desired force. This results in a quick, effective and controlled removal of any residual flash of simple as well as complicated designed parts.

Cryogenic deflashing is also helpful in removing inner dimensional complex flash that are tough or sometime not possible to remove by any other method.

The physical properties of molded parts are not affected during this process.

Prerequisites:

Flash should be advisable to be as thin as possible (<0.25mm). Lesser the better.

Advisable to have rubber parts made in cryo-mold -> better finishing Vs tear groove mold. Cryo mold also helps in less rubber compound consumption and lower liquid nitrogen usage.



# CRYOGENIC DEFLASHING SHOT BLASTER

The machine series UCNB is a highly efficient, fully automatic as well as cost effective machine for deflashing of flashes, burrs of injection, compression molded parts by using cryogenic freezing.

- Machine is suitable for most rubber, plastic, die-cast zinc or rubber-metal products.
- Provides high level of quality deflashing finish
- One man job-operating the machine.



## MACHINE HIGHLIGHTS

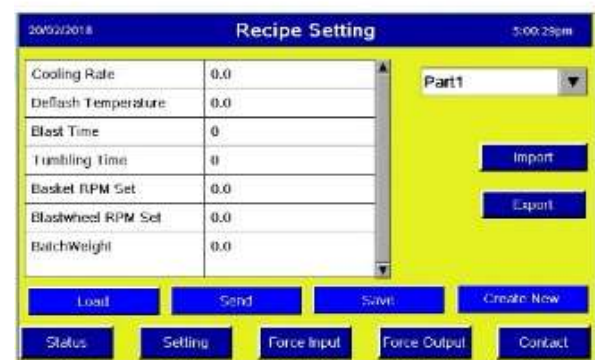
- 100% Made In India.
- PLC & HMI based operating.
- Available in 4 different sizes.
- Maximum cooling temp -125 °C
- Solid frame structure – pure SUS304
- Compact design require less space.
- Easy to operate and less maintenance.
- Safety interlocks and alarms.
- CE certified – global standards.
- Thick insulation – lesser noise.
- Worldwide customer acceptance.

## MACHINE USER INTERFACE

- Colored touch screen human machine interface.
- Schneider / Siemens PLC HMI.
- Option for multi language support for international customer.
- Option of saving different process parameters for different products.
- Remote access thru WIFI hotspot for online program troubleshooting.
- Alarms, diagnostics, errors.



Sample of HMI Screen



Recipe Manager Screen

## ADVANTAGES

### Experienced in rubber and plastic industry.

Cryogenic deflashing is a proven technology in flash removal from parts made out of rubber, silicone, plastics as well as metal alloys.

### Less Space, efficient and high productivity

The deflashing machine utilize very less space compared to other methods. Single machine can perform the tasks of 30-50 people required for manual deflashing, hence makes deflashing machine faster and efficient finishing process.

### Reduce risks, downtime and nill rejection

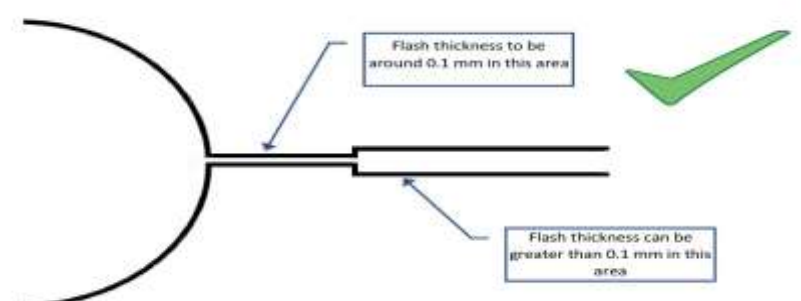
In manual deflashing, companies are depended on labor availability, outsourcing, rejections due to undercuts,

overcut by usage of knife, scissor.

Deflashing machine on other hand reduce risk of such labor dependency and provide almost nil rejections. **Deflashing machine can be used for precise flash removal at ID, OD as well as critical areas.**

Cryogenic deflashing machine also doesn't require rubber parts having tear groove design mold. It is advised to have flat flash mold design / cryogenic deflashing design. **Hence, the process helps in saving rubber compound consumptions or increase in part productivity out of same material usage.**

IDEAL DESIGN





## **SUPPORT AND SERVICES**

**Trials, Installation, Training, Process optimization stabilisation.**

**Branded and genuine spare parts.  
Easily available worldwide.**

**Onsite local service support for  
domestic (India) location.**

**AMC option available**

**Remote service support thru hotspot  
connectivity and/or webmeet for  
International location.**

**Onsite service support option available  
on need basis.**

**Mold design support and supply  
Mold for cryogenic deflashing machine  
can be provided and guided as per need.**

## Machine Specifications

Item	UCNB-30/40	UCNB-60	UCNB-120	UCNB-200
Barrel volume range (ltr)	30/40	60	120	200
Operating Mode	HMI + PLC	HMI + PLC	HMI + PLC	HMI + PLC
Cooling temperature range	0 -135° C	0 -135° C	0 -135° C	0 -135° C
Wheel Speed	0 - 7500 rpm	0 - 7500 rpm	0 - 7500 rpm	0 - 7500 rpm
Electrical Capacity (KW)	5.5	5.5	6.5	8
Power supply (3 Phase)	AC410V/50Hz	AC410V/50Hz	AC410V/50Hz	AC410V/50Hz
Machine Frame	SS304	SS304	SS304	SS304
Machine weight (Approx kg)	800	1000	1200	1600
Electrical Components	Siemens, Schneider	Siemens, Schneider	Siemens, Schneider	Siemens, Schneider
Deflashing Media	Cryogenic Polycarbonate	Cryogenic Polycarbonate	Cryogenic Polycarbonate	Cryogenic Polycarbonate
Additional features	Input parameter saving	Input parameter saving	Input parameter saving	Input parameter saving
Hot Air system	Yes	Yes	Yes	Yes
Liquid Nitrogen pressure supply	2 bar	3 bar	3 bar	3 bar