

Technical Instruction

Ultrasonic Degating Machine



Zhejiang Zhenbo Precision Machinery Co.,Ltd

Contact: Alex Lee



Machine Outlook

CNZHENBO
臻博机械

MP Sonic
Welding and cutting system

Mode Code: MPZ-E1526-R2S-CV1.5



BENEFIT OF MACHINE:

- **Economical Equipment Cost**
- Clean & Neat degating;
- Stable machine performance;
- Automation operation.





What is ultrasonic degating



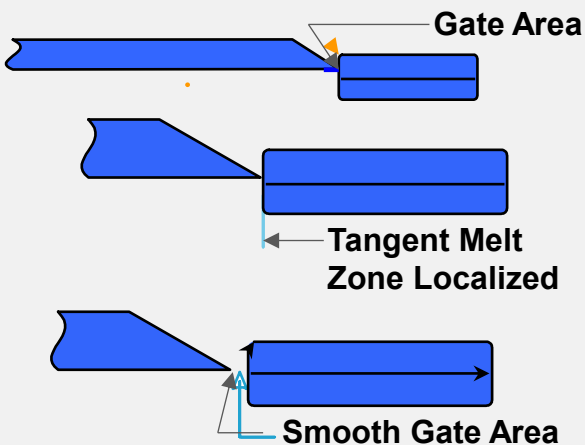
Ultrasonic degating is a precision post-molding process used to separate injection molded parts from material formed by its runner system with ultrasonic oscillation energy, thus it also called as ultrasonic separating, ultrasonic gate breaking or ultrasonic gate vibration-off. During ultrasonic degating, the energy from ultrasonic system is focusing at the injection runner gating points and case vibration high frequency (ultrasonic oscillation in 15KHz or higher), then heating caused to melt the material at the gating point, which breaks off the gate in neat by which separate workpieces from the waste material formed by runner system.

Comparing traditional degating method, ultrasonic degating is in higher operation efficiency, resulting neat & clean break.

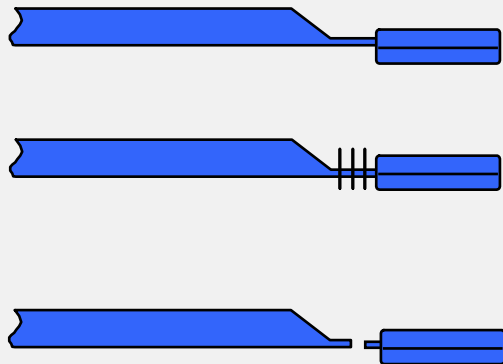


Injection Gate Design for ultrasonic degating

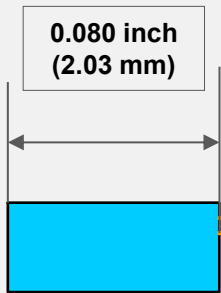
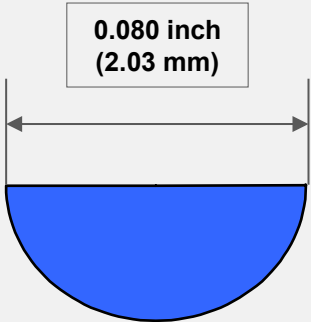
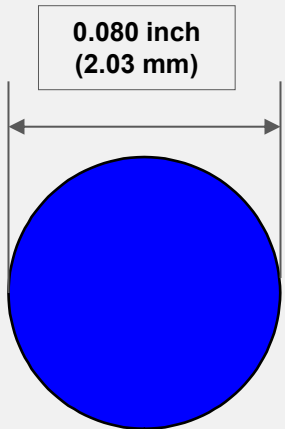
Good design



Poor design



■ Gate Size





Critical Parts — Conveyor



BENEFIT OF MACHINE:

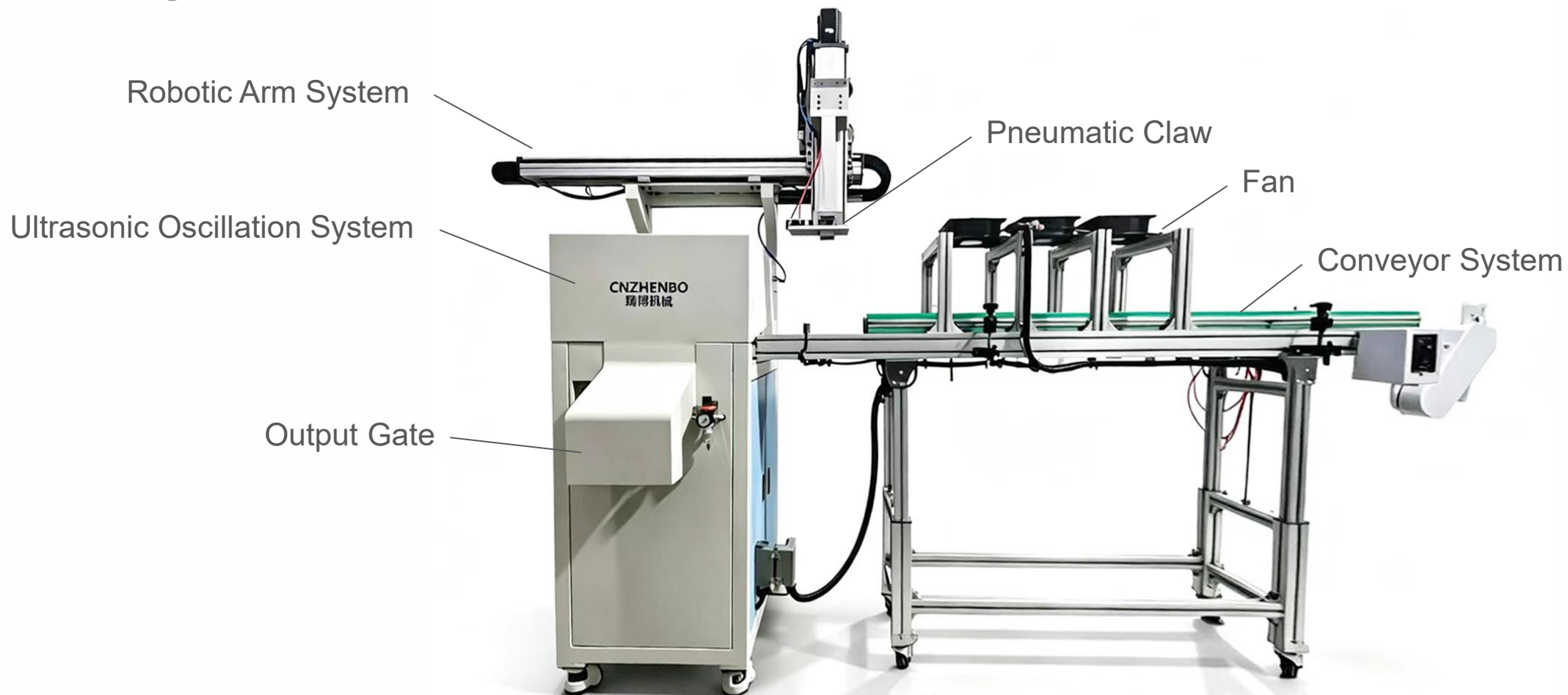
- Economical Equipment Cost
- Clean & Neat break-off;
- High efficiency;
- Stable machine performance;
- Automation operation.



Machine Construction

CNZHENBO
臻博机械

MP Sonic
Welding and cutting system

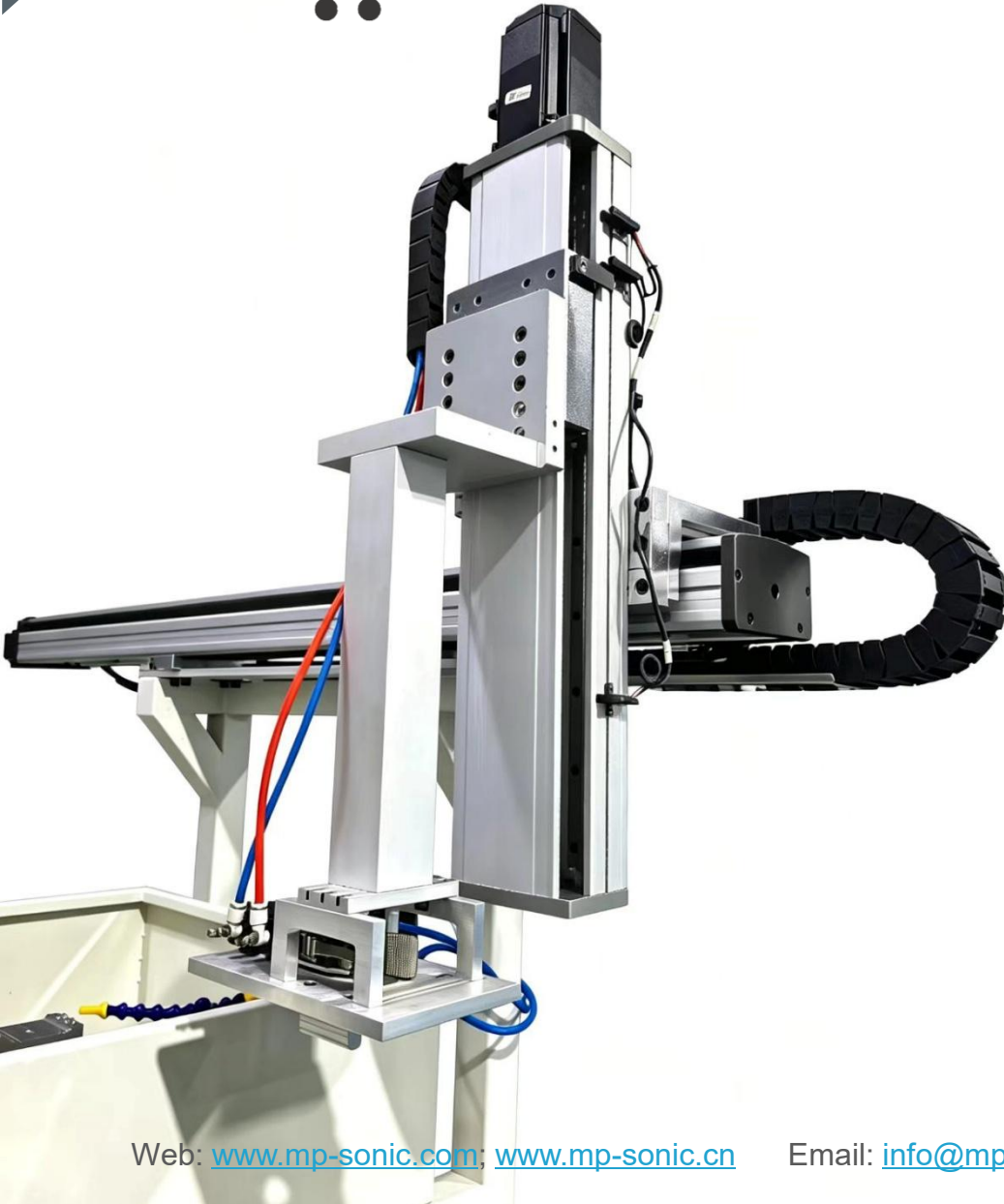




Critical Parts — 2-Axies Robotic System

CNZHENBO
臻博机械

MP Sonic
Welding and cutting system



2-axies robotic system applied for loading and feed-in workpieces:

- *High precision motion;*
- *Adjustable motion distance;*
- *High motion speed;*
- *Settable motion speed and force;*
- *Pneumatic claw for loading & unloading.*



Critical Parts — Main Machine

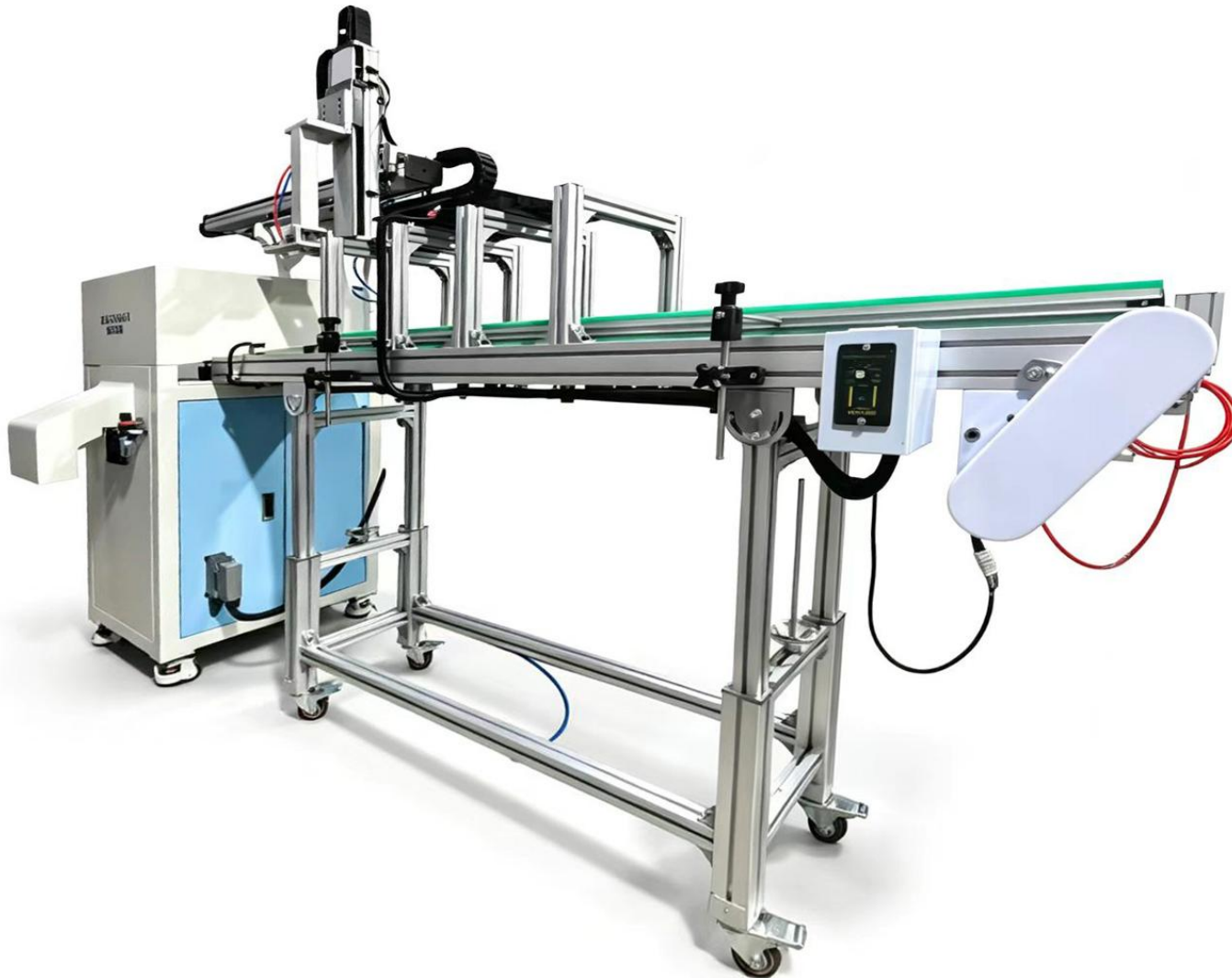


Specification

Power Source	220V, 1P, AC, 50/60Hz
Air Source	0.5MPa
Ultrasonic Frequency	15KHz
Ultrasonic Power	2600W
Power Consumption	Max6KW
Robotic System	2-Axiles, by servo systems



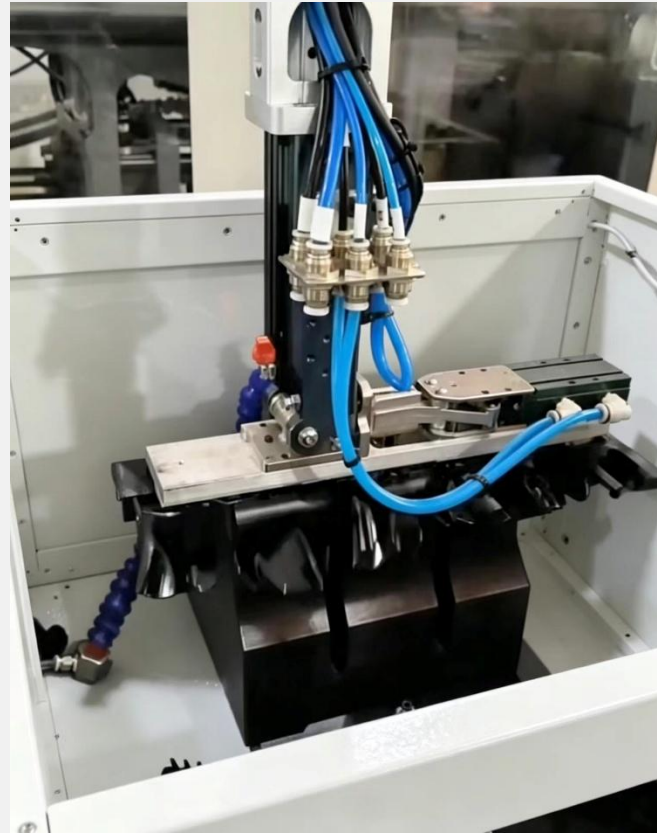
Critical Parts — Conveyor



- Speed adjustable;
- Sensor controls stopping/Starting for loading positioning;
- Channel width adjustable for different size of workpieces;
- Cooling channel for efficiency operation.



Critical Parts — Claw System and Ultrasonic Tooling



- *Work-pieces is clipped by pneumatic claw;*
- *Ultrasonic tooling (ultrasonic horn) is designed according to workpieces injection molding design, horn material can be aluminum, steel or titanium.*



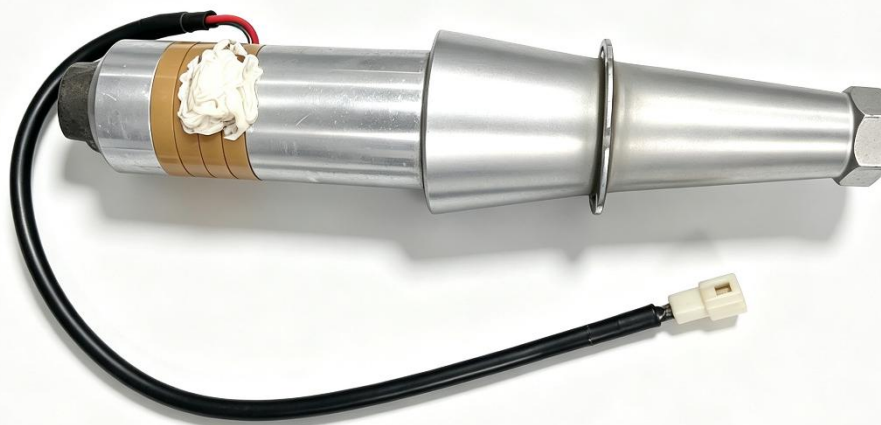
Critical Parts — Ultrasonic System

CNZHENBO
臻博机械

MP Sonic
Welding and cutting system



Generator



Converter



Ultrasonic Horn

Thanks

Tel :+86-577-61517751

Fax :+86-577-61517750

Mob:+86 15918523336

Email :info@mp-sonic.com;

Add :No.289, Weiqi Road, Yueqing Economic
Development Zone, Wenzhou, China

Web:www.mp-sonic.cn; www.mp-sonic.com;