

Pata-Gun

Shock wave jet air nozzle



What is PATA GUN ?

New Air Nozzle

Air jet exit rotates or operates with amplitude at high speed.

It strikes powerful shock wave air over a wide area.



Rotation movement
Approx. 1,500 rpm



Amplitude movement
Approx. 1,800 times/min

PATA GUN 3 Models



Basic wide range type
Rotating shock wave type SPG-40



Pin point jet type
Rotating shock wave type SPG-25



Super wide range type
Amplitude shock wave type PGO-91

Amazing points of PATA GUN

1: STRONG

Intermittent slapping shock wave air enhances the blow effect
(Example) Comparison of spraying on Clay surface



Amazing points of PATA GUN

2: Fast Work

Fast and reliable work due to wide processing width

(Example) De-watering comparison of printing screen



Conventional Air Blow Gun

- It takes much time.
 - Not reliable
- (Water and Foreign matter remain)



PATA GUN

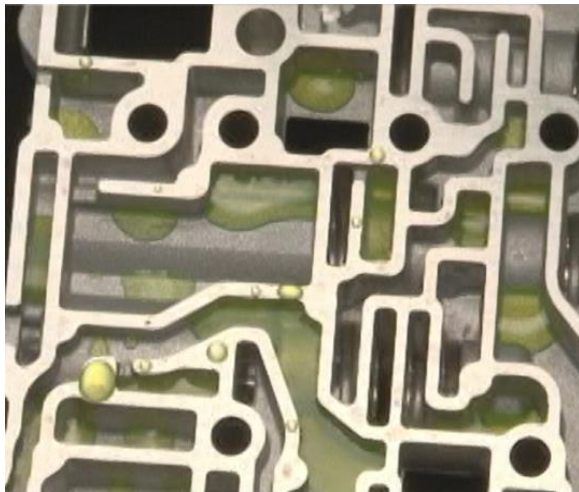
- Fast Work
- Reliable

Amazing points of PATA GUN

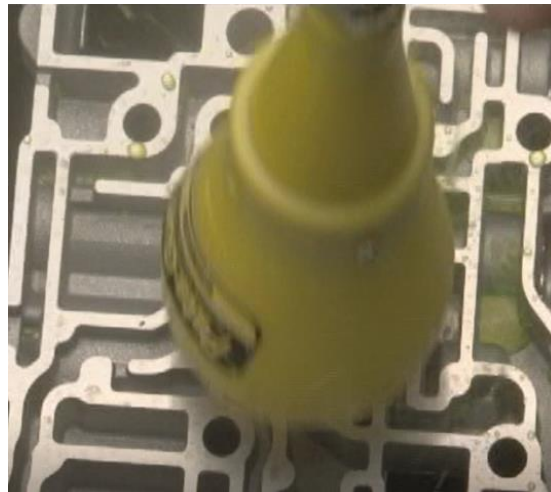
3:Very effective
on uneven surface(凹凸)

Air hits from various directions, so it reaches deep in unevenness(凹凸)

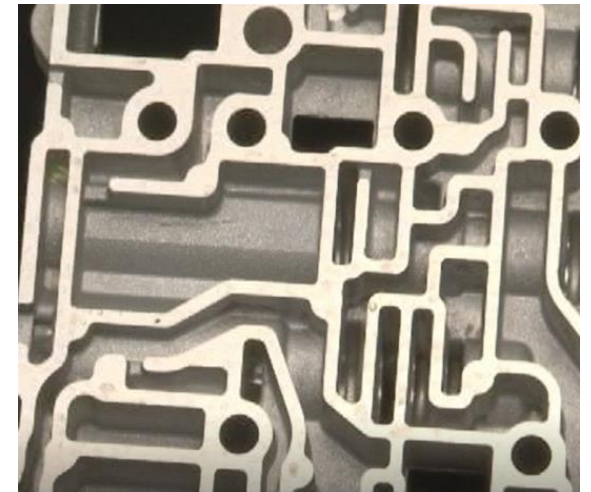
(Example) Oil removal from automotive cutting parts



Before



In blow process



After

Amazing points of PATA GUN

4:Tapping(Hammering) Effect

Powder and dust can be removed instantly with the beat effect of shock wave

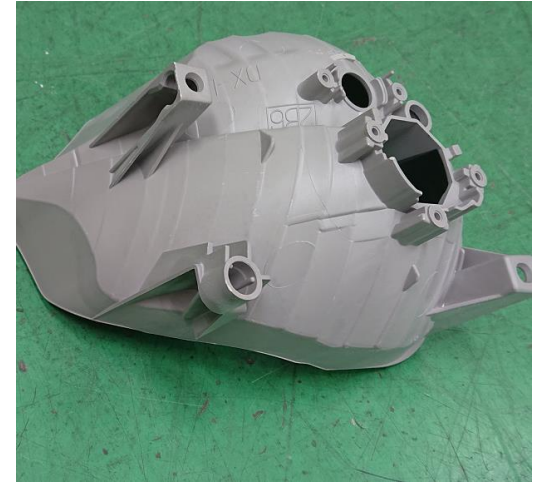
(Example) Removal of abrasive powder from headlight resin parts



Before



In blow process



After

Amazing points of PATA GUN

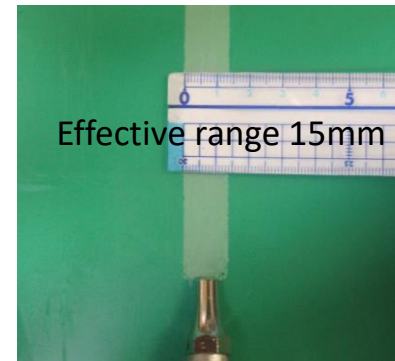
5:Earth-Friendly-1

Consumption Energy comparison in the same air consumption with conventional nozzles



Compressor 1.5kw
CO2 emissions of
1.365t in one year

**3.6 tons reduction of
CO2 emissions
in one year
(Due to comparison
in our company)**



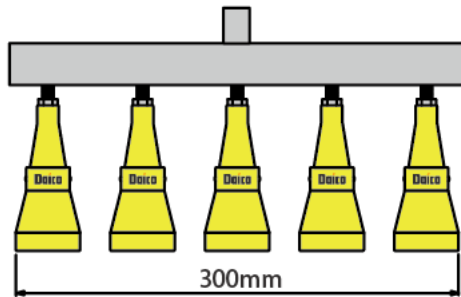
Compressor 5.5kw
CO2 emissions of
5.005t in one year

※The above CO2 emissions are assumed to be 250 days a year for 8 hours a day.
The calculation of CO2 emissions uses the emission coefficient of 0.455kg-CO2 / kwh
for fiscal 2018 published by Tokyo Electric Power Company of Japan.

Amazing points of PATA GUN

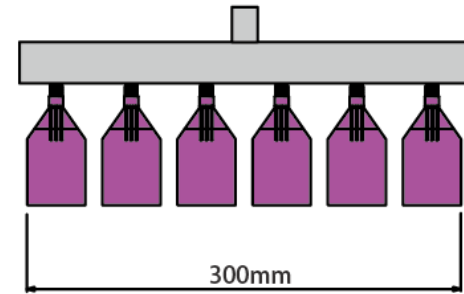
5:Earth-Friendly-2

Consumption Energy comparison of Blow processing of 300mm width with conventional nozzle



SPG-40 x 5pcs

**13 t reduction of CO2 emissions in one year
(Due to comparison in our company)**



Resin Nozzle x 6 pcs

Compressor 7.5kw

CO2 emissions of 6.825t in one year

Compressor 22kw

CO2 emissions of 20.02t in one year

※The above CO2 emissions are assumed to be 250 days a year for 8 hours a day.
The calculation of CO2 emissions uses the emission coefficient of 0.455kg-CO₂ / kwh for fiscal 2018 published by Tokyo Electric Power Company of Japan.

Case study (automobile-related factory)

- © Removal of oil and chips from aluminum die-cast parts
- © Dust removal and Dewatering before abrasive powder removal and painting after deburring of resin parts around lights and interior
- © Removal of surplus rust preventives from pressed products such as body frames etc.
- © Dewatering after washing of related parts such as wipers, wheels, oil filters etc.
- © Dust removal of electronic devices
- © Detaching resin parts from injection molds and removing flash

Customer(Automobile related)

- ◎Toyota
 - ◎Nissan Motor
 - ◎Honda Engineering
 - ◎Mitsubishi Heavy Industries
 - ◎Toyota Industries Corporatio
 - ◎Aisin Seiki
 - ◎Denso
 - ◎Stanley Electric
 - ◎NGK
 - ◎Koito Manufacturing
 - ◎Ichiko Industry
 - ◎Japan Wiper Blade
 - ◎ Tokyo Roki
- and many others

Kaizen Example

- ◎ Certain electrical equipment manufacturer: Work time was reduced to 1/6 in dust removal processing of connectors.
- ◎ Certain automaker: In removing water-based oil and chips from the cylinder block of the engine, taking out the oil to the next process was reduced by half. Rejected products due to remaining chips are reduced by 20%.
- ◎ Certain headlight component manufacturer: Work time was reduced to one-third in removing abrasive powder after deburring resin parts.
- ◎ Certain headlight component maker: The work time for dewatering after cleaning the resin lens is reduced to less than 1/10. Labor costs also have been reduced significantly by automating operations.