

# Everloy Descaling Nozzle Technology

## Erosion

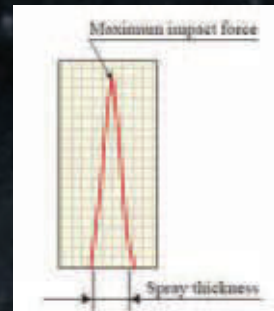
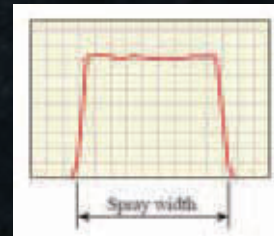
EVERLOY was the first nozzle manufacturer to develop the aluminum erosion test as a completely new nozzle evaluation method. As the aluminum plate A1050 has similar hardness characteristics at ambient temperatures as steel does at the temperature range with which it should be descaled, this is an effective way to measure performance of the nozzle. Since its development, this method has become the industry standard.

## Impact Force

One of the most important factors for choosing the Descaling Nozzle is its impact force.

**For spray width :** Impact force distribution is evaluated to ensure descaling performance across the entire spray width is optimized.

**For spray thickness :** The thinner the spray thickness, the greater the impact force. The peak of the impact force is called the maximum impact force and this has become the standard to evaluate the performance of our Descaling Nozzle.



## Spray Angle – Everloy brand Tungsten Carbide

EVERLOY offers spray angles with single digit increments for precise applications and superior performance. We offer the best tips and grades of tungsten carbide. In-house Manufacturing capabilities, production and quality control are strictly monitored and flexible enough to make fast deliveries feasible.



As a leading manufacturer of tungsten carbide, EVERLOY, over the past 70 years, has developed proprietary technology that is applied to extend the life and performance of tungsten carbide.

## Overlap

Having a proper overlap is extremely important to avoid stripe marking on the strip surface known as “tiger marks”. At the same time, the thickness and waves of the strip need to be considered. Ask an Everloy Sales Representative for the best layout feasible utilizing Everloy’s Descaling Calculation Program.

## Solutions

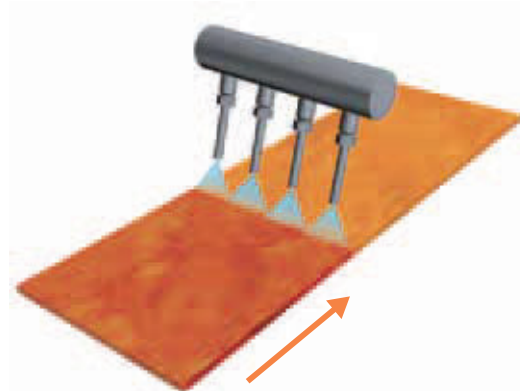
### Higher impact force options:

1. The latest DNEX technology gives customers a higher impact force than conventional nozzles without increasing water flow/pump capacity.  
 ⇒ Improved surface quality by keeping same water flow with the current nozzles.
2. Applying the long nose tip with the wider spray angle model that compensates for the lack of proper spray height and provides appropriate overlap. The long nose tips are normally used for trial purposes only.

Use of normal standard tip



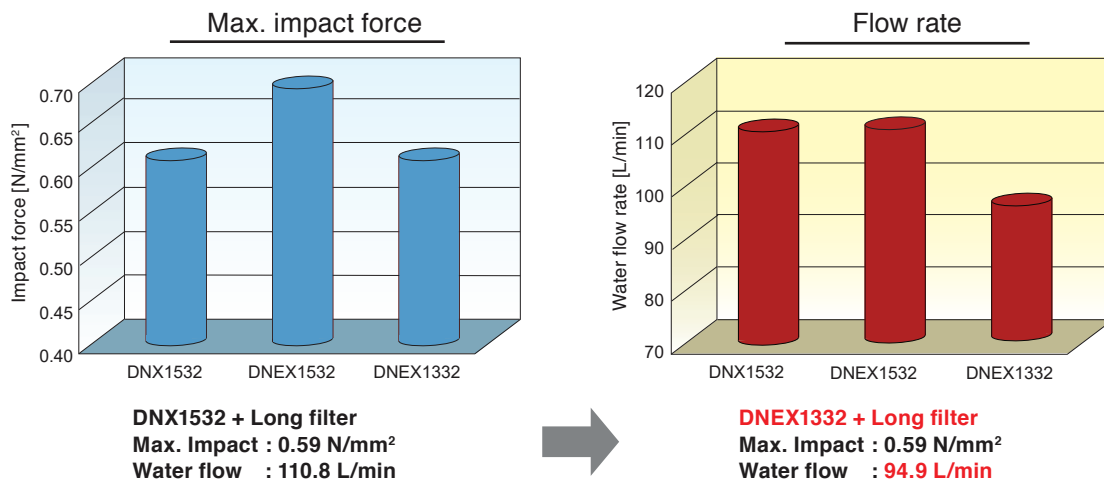
Use of long nose tip



### Water flow reduction

With the DNEX technology, even if the flow rate is reduced by 15 %, it keeps the same impact force of the DNX.

Case study at 150 bar pressure and at 300 mm spray distance



### Benefit of water flow reduction

Lower water consumption contributes to substantial cost savings regarding:

#### Electricity Reduction

- Reduced pump capacity and/or fewer operating pumps.

#### Gas Reduction

- Potential for discharge temperature drop from re-heat furnace.