

# Blades equivalent to Siemens V64.3A / SGT-1000 and Ansaldo AE64.3A

Sulzer provides design and manufacturing of new gas turbine components in both hot and cold sections. We focus on lifetime extension and performance improvement of your equipment. We have unique insight into designing a high quality product that is compatible with the original equipment. All blade kits include installation hardware suitable for installation in Siemens V64.3A / SGT-1000F and Ansaldo AE64.3A gas turbines.

## First stage blade

The first stage blade is manufactured through an investment casting process using a nickel-based super alloy. The casting structure is directionally solidified for increased durability and reparability. The blade is internally cooled and covered with (fan shape) film cooling holes for superior surface cooling. Thermal Barrier Coating (TBC) is applied on the airfoil surface as well as an internal aluminum diffusion coating. TBC has superior heat, oxidation and corrosion resistance for base load as well as peak load applications. The internal surface has an aluminum diffusion coating to improve resistance against intergranular attack.



### First stage blade

<b>Design</b>	3D airfoil design with tip pocket
<b>Cooling</b>	Internal serpentine cooling passages and (fan shape) airfoil cooling holes
<b>Material</b>	Directionally solidified nickel-based super alloy
<b>Coating</b>	External 100% TBC coverage and internal aluminum diffusion coating
<b>Auxiliaries</b>	All installation hardware included

## Second stage blade

The second stage blade is also manufactured through investment casting process using an advanced directionally solidified nickel-based super alloy. The blade will be cooled by a combination of as-cast serpentine cooling passages and airfoil film cooling holes. Just like the first stage blade an internal aluminum diffusion coating and an external TBC for extended durability is applied.



### Second stage blade

<b>Design</b>	3D airfoil design with tip pocket
<b>Cooling</b>	Internal serpentine cooling passages and airfoil cooling holes
<b>Material</b>	Directionally solidified nickel-based super alloy
<b>Coating</b>	External 100% TBC coverage and internal aluminum diffusion coating
<b>Auxiliaries</b>	All installation hardware included

## Third stage blade

The third stage blade is manufactured through investment casting using an enhanced nickel-based super alloy. The blade has 15 radial cooling holes created by electro-chemical drilling. The airfoil surface will be coated with a MCrAlY coating and internal aluminum diffusion coating to optimize corrosion and oxidation resistance.



### Third stage blade

<b>Design</b>	Conventional airfoil shape
<b>Cooling</b>	15 radial cooling holes
<b>Material</b>	Nickel-based super alloy
<b>Coating</b>	External MCrAlY and internal aluminum diffusion coating
<b>Auxiliaries</b>	All installation hardware included