

# Vanes equivalent to Siemens V94.2 / SGT5-2000E

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 and interchangeable with the original equipment. All vane kits include installation hardware suitable for installation in Siemens V94.2 / SGT5-2000E gas turbines.



## 1st stage vane

The first stage vane is manufactured through an investment casting process using the nickel-based super alloy Inconel 738LC. The first stage vane features trailing edge cooling and internal impingement cooling. Depending on the component version (3, 4, 5, or 6), different coatings and coating systems are applied. The first stage vane is coated with a MCrAlY coating to protect the base material against oxidation and corrosion. In addition, Thermal Barrier Coating (TBC) is applied to prevent the base material from overheating and to reduce thermal gradients along the hot gas path. This effect produces a lifetime extension resulting in improved durability.

## 2nd stage vane

The second stage vane is also manufactured through an investment casting process using the nickel-based super alloy Inconel 738LC. The second stage vane features trailing edge cooling and internal impingement cooling. Depending on the component version (3, 4, 5, or 6), different coatings and coating systems are applied. The second stage vane is coated with a MCrAlY coating to protect the base material against oxidation and corrosion. In addition, TBC is applied to prevent the base material from overheating and to reduce thermal gradients along the hot gas path.

## 3rd stage vane

The third stage vane is also manufactured through investment casting using the nickel-based super alloy Inconel 738LC. The alloy has superior creep properties compared to the original alloy Inconel 939. As a result, deflection of the shrouds is minimized during operation. The third stage vane is internally cooled. Depending on the version, the third stage vane is supplied with a MCrAlY coating to protect the base material against corrosion.

## 4th stage vane

The fourth stage vane is also manufactured through investment casting using the nickel-based super alloy Inconel 738LC to minimize deflection of the shrouds during operation.

Vane stage 1	
<b>Firing temperature</b>	Up to 1'075°C (1'967°F)
<b>Design</b>	Version 3, 4, 5, and 6
<b>Cooling</b>	Trailing edge Internal impingement cooling
<b>Material</b>	Inconel 738LC
<b>Coating</b>	External MCrAlY coating External thermal barrier coating
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included

Vane stage 2	
<b>Firing temperature</b>	Up to 1'075°C (1'967°F)
<b>Design</b>	Version 3, 4, 5, and 6
<b>Cooling</b>	Trailing edge Internal impingement cooling
<b>Material</b>	Inconel 738LC
<b>Coating</b>	External MCrAlY coating External thermal barrier coating optional
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included

Vane stage 3	
<b>Firing temperature</b>	Up to 1'075°C (1'967°F)
<b>Design</b>	Version 3, 4, 5, and 6
<b>Cooling</b>	Internal cooling
<b>Material</b>	Inconel 738LC
<b>Coating</b>	MCrAlY coating
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included

Vane stage 4	
<b>Firing temperature</b>	Up to 1'075°C (1'967°F)
<b>Design</b>	Version 3, 4, 5, and 6
<b>Material</b>	Inconel 738LC
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included

## Services

- Component refurbishment
- Lifetime extension
- Field service
- New parts manufacturing
- Training programs
- Rotor overhaul and refurbishment
- Long term service agreements
- Condition monitoring
- Turbine controls
- Engineering support



**Sulzer Turbo Services Venlo B.V.**  
 Spikweien 36  
 NL-5943 AD Lomm, The Netherlands  
 Phone +31 (0)77 47386 66  
 Fax +31 (0)77 47327 85  
 E-mail [sulzertsvenlo@sulzer.com](mailto:sulzertsvenlo@sulzer.com)

[www.sulzer.com](http://www.sulzer.com)

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