



- 1st stage bucket
- 2nd stage bucket
- 3rd stage bucket

Buckets Equivalent to GE MS9001E

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 a unique insight into designing a high quality product that is compatible and interchangeable with the original equipment. All bucket kits include installation hardware suitable for installation in PG9171E gas turbines.

1st stage bucket

The first stage bucket is manufactured through an investment casting process using Sulzer's advanced nickel-based super alloy EEQ-111 which is equivalent to the original GTD 111. The first stage bucket features 11 cooling holes, 8 of which will be turbulated in the airfoil zone to maximize airfoil cooling.

Sulzer applies a MCrAlY coating to the airfoil using Low Pressure Plasma Spray (LPPS). The coating has superior oxidation and corrosion resistance for base load as well as peak load applications due to its aluminum enriched composition. Cooling holes have an aluminum diffusion coating to improve resistance against intergranular attack. The application of a Thermal Barrier Coating (TBC) on the airfoil surface produces a lifetime extension resulting in improved durability.

2nd stage bucket

The second stage bucket is also manufactured through investment casting. The base material for the second stage bucket is identical to the first stage bucket, EEQ-111. The second stage bucket features 6 cooling holes.

Externally, a LPPS CoNiCrAlY is applied to optimize corrosion and oxidation resistance. The cooling holes are coated internally with an aluminum diffusion coating to improve resistance against intergranular attack.

Optionally, the knife edges of the second stage bucket are supplied with cutter teeth in conjunction with honeycomb shroud blocks. This will limit material transfer between knife edges and the honeycomb in the shroud blocks during operation.

3rd stage bucket

The third stage bucket is manufactured through investment casting using the base material Inconel 738LC.

Similar to the second stage bucket, the knife edges of the third stage bucket can be supplied with cutter teeth to prevent material transfer between knife edges and the honeycomb in the shroud blocks during operation.

| Bucket stage 1 | |
|----------------|--|
| Firing temp. | Up to 1,124°C (2,055°F) |
| Design | Blunt leading edge |
| Cooling | 11 Turbulated cooling holes |
| Material | EEQ-111 |
| Coating | External over-aluminized MCrAlY coating Optional Thermal Barrier Coating Internal aluminum diffusion coating |
| Sealing | Aluminum seal strip on fir tree |
| Auxiliaries | Locking hardware included |

| Bucket stage 2 | |
|----------------|---|
| Firing temp. | Up to 1,124°C (2,055°F) |
| Design | Cutter teeth Optional without cutter teeth |
| Cooling | 6 Cooling holes |
| Material | EEQ-111 |
| Coating | External MCrAlY coating |
| Sealing | Aluminum seal strip on fir tree |
| Auxiliaries | Locking hardware included |

| Bucket stage 3 | |
|----------------|----------------------------|
| Firing temp. | Up to 1,124°C (2,055°F) |
| Design | Optional with cutter teeth |
| Material | Inconel 738 LC |
| Auxiliaries | 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

About Sulzer

Sulzer provides cutting-edge services and solutions for rotating equipment dedicated to improving customers' processes and business performances. When pumps, turbines, compressors, generators, and motors are essential to operations, customers need a service partner they can trust. With our technically advanced and innovative solutions, we give our customers the assurance they need to focus on their operations. Customized solutions help to reduce maintenance time and cost. Our partners' business demands are ever increasing and changing but they can rely on our experts to provide the optimal solution to improve operational efficiency and reliability. We provide high-quality services at competitive prices and delivery times.



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