

Brush Seals



for Aerospace Gas Turbines





Designers in the aerospace industry, constantly striving for greater gas turbine performance and efficiency, now recognise the contribution that brush seals can make, offering as they do significant improvements over traditional labyrinth seals.

Real efficiency gains in aircraft gas turbines can be achieved by incorporating brush seals which are correctly matched to the engine operating conditions.



The extensive design and production facilities at Cross Manufacturing Company utilise methods and special-purpose equipment developed in-house, which enable us to provide seals precisely matched to each particular application, whether for development parts or for series production.



Cross have been involved in the design, test and manufacture of aerospace brush seals for over 25 years, during which time we have developed the capability of providing sealing solutions tailored to deliver superior performance under the demanding conditions encountered in an aircraft gas turbine.

A brush seal contains many thousands of fine wires, which touch the rotor, forming an effective barrier to gas flow, whilst retaining the ability to deflect during shaft excursions and thermal movements without permanent loss of sealing efficiency.

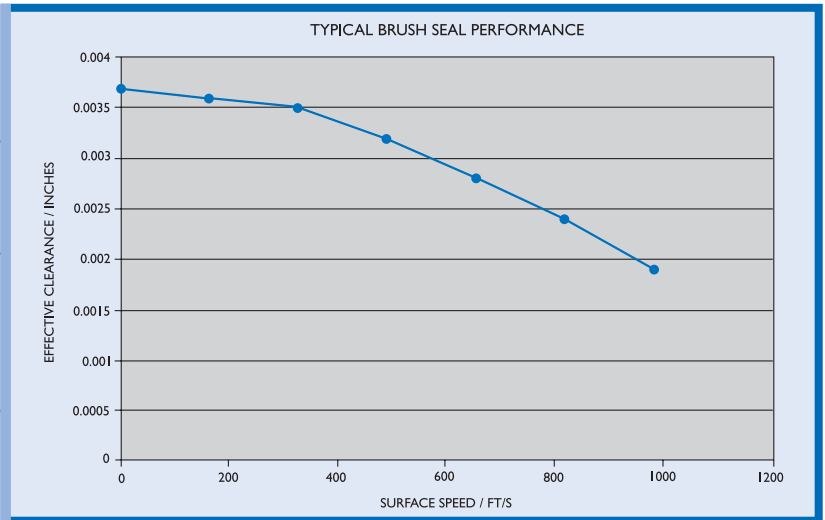


Operating Conditions

Maximum shaft surface speed 1260ft/sec

Maximum temperature 600°C

Maximum pressure drop per single stage 300psi



The ability to carry out cost effective dynamic hot testing closely replicating full size engine conditions, while concurrently engineering the production of engine hardware, ensures we achieve minimum time to market for our customers.

The dedicated team of engineers and technicians at Cross is committed to providing the best possible sealing solutions, together with service and customer support to the highest standard.

Cross brush seals contribute to increased efficiency, both in new equipment and as part of performance upgrade packages on existing equipment. Our seals have now been in service in field applications for many thousands of hours, demonstrating the sustained performance benefits of brush seals, when correctly matched to engine conditions.





The Company

Cross Manufacturing Company have specialized in the design and manufacture of sealing products for over seventy years.

The company was founded on the ability to produce high quality sealing rings from wrought alloys. This process has been constantly developed and now provides heat resisting seals for the aerospace, power generation and automotive industries.

In recent years Cross engineers have played a key role in the introduction of brush seals to the aerospace and power generation industries.

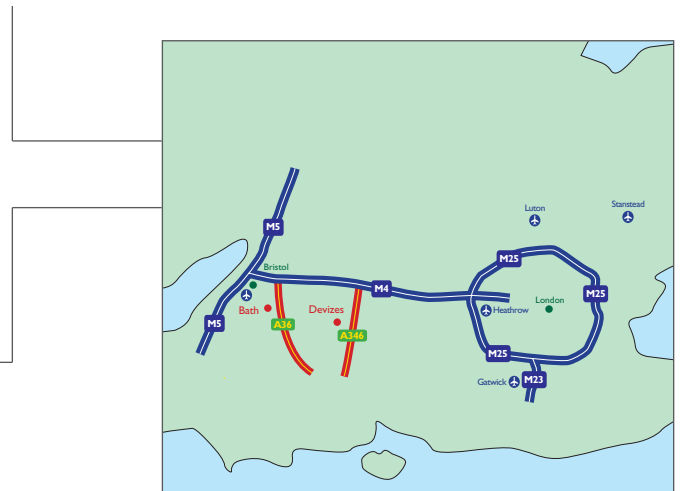
Operating from two sites in the West of England, totalling some 140,000 square feet of floor area and employing over 250 people, Cross provide a responsive and reliable service to customers the world over. With continuing investment in facilities, equipment and test and development capabilities, Cross are strongly placed to match the growing world demand for brush seals.



Devizes Plant



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