



## Blue Diamond High Performance Seals Increase Efficiency and Extend Operating Life

Blue Diamond, the Southampton based manufacturer of specialist seals, announces a seal design service for applications where high performance and efficiency are required. In today's competitive markets, there is a much greater awareness of the energy efficiency of rotating machines, and one way that energy consumption can be reduced is by maximising efficiency.

Most items of rotating equipment feature seals which make contact with a rotating shaft. When the lip of the seal bears down on the shaft there is friction and sticktion to be overcome. Friction and sticktion are affected by factors such as lip design, lip force and material, operating environment, age and usage. Each application places different demands on a seal and it is often impossible to find a standard seal that has the right characteristics for an individual application. If a standard seal is specified, its design and construction often has to be a compromise to cover the myriad of possible uses.

With efficiency becoming increasingly important, a modest improvement in seal design can reduce losses and extend operational life. For example, the geometry of the lip, radial load and materials all affect the performance of a seal and with so many different applications, materials and design options, designing the correct seal can be a daunting task.

The application engineers at Blue Diamond have the knowledge and experience to design and manufacture seals to meet individual customer's requirements. Using powerful software, CAD and parametrics packages, the designers can build in a range of factors such as pressure and temperature to minimise cost and maximise performance.

Blue Diamond seals are available in a range of standard materials including Viton/FKM, Silicone, Nitrile, HNbr or ACM. By changing different elements of the design, the application engineer can achieve the optimum result. For example, the material, lip interference and spring loads can all be instantly varied and their effect on the performance of the seal observed. All this is possible without having to manufacture any prototype products, with their inherent implications of time and cost.

When the engineers are satisfied with the performance of the seal using the computer simulation, samples can be manufactured and the seal characteristics confirmed using Blue Diamond's extensive in-house test and development facility.

Sited adjacent to the test area is a comprehensively equipped manufacturing facility and because the product design and manufacturing programme takes place under the same roof, development times can be minimised.

So why make do with a seal that over its lifetime will consume significantly more energy than a custom designed seal from Blue Diamond? By investing in the right seal for the job, the competitive status of your product can be significantly improved resulting in increased sales and improved customer satisfaction.

For further details contact:-

Blue Diamond Technologies Ltd, Rolwey House, School Close, Chandlers Ford,  
Eastleigh, Hampshire SO53 4BY. Tel: (023) 8025 8966 Fax: (023) 8025 8989  
E-mail: [bdsales@rolwey.com](mailto:bdsales@rolwey.com) Website: [www.blue-diamond.co.uk](http://www.blue-diamond.co.uk)