



**DICHTOMATIK**

Dichtomatik Limited  
Donington House Riverside Road Pride Park Derby DE24 8HX

## **PRESS RELEASE DL022**

# **SOLVING SEALING PROBLEMS FOR FLOW CONTROL PRODUCTS**

Ball valves, utilising a drilled-through ball rotating in a retaining socket, are widely used for process line control operations within industry. Typical areas of application for these valves include oil and gas, chemical processing, power generation together with pulp and paper industries among many others.

Ball valves offer both flow throttling and full shut-off conditions, while applications can involve an extensive range of pressures, temperatures and even the use of chemically aggressive fluids. The importance of specifying the right sealing products for use within these valves becomes paramount, particularly where breakdowns or plant shutdowns caused through valve failure can be catastrophic.

The specialist sealing company, Dichtomatik Ltd, are able to provide the Kalrez<sup>®</sup> range of perfluoroelastomer 'O' rings from the Dupont<sup>™</sup> Performance Polymers range, which have been formulated to provide superior sealing qualities for even the most difficult applications.

Dichtomatik Limited

Donington House  
Riverside Road  
Pride Park  
Derby DE24 8HX

Tel: 01332 / 524400  
Fax: 01332 / 524404  
[www.dichtomatik.co.uk](http://www.dichtomatik.co.uk)  
[Email@dichtomatik.co.uk](mailto:Email@dichtomatik.co.uk)

Company Reg. No.  
2188991  
V.A.T. Reg. No.  
507 6262 52  
Registered Office  
as above



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**BFPDA**

A recent problem application featured a trunnion mounted ball valve used in the gas cleaning/sweetening processes. This involved the removal of carbon dioxide and acidic gasses such as hydrogen sulphide from gas streams, including synthesis gas produced by the gasification of coal, coke and heavy hydrocarbon oils. Gas sweetening is commonly undertaken in refineries, petrochem plants and NG processing etc, where the process often utilises a glycol-based solvent for the acid gas removal.

The solvent chemistry, together with RGD (Rapid Gas Decompression), can attack the valve seals and 'O' rings typically located in the valve seat. This can lead to seal life reduction, premature valve leaks and higher costs for both plant operation and maintenance.

A successful solution was achieved by the fitting of DuPont™ Kalrez® Spectrum 7090 seals. These perfluoroelastomer products offer an excellent combination of chemical compatibility, with both RGD and high temperature resistance for 'O' ring applications, particularly where handling glycol-based solvents. Valve leakages can be dramatically reduced, with a reduction in maintenance procedures resulting from the extension of MTBR (Mean Time Between Repairs).

The DuPont™ Kalrez® Spectrum 7090 seals are specifically targeted for applications requiring high hardness/higher modulus properties. They have extensive mechanical properties including compression set resistance and seal force retention with good responses to both temperature cycling effects and RGD resistance. They are well suited to combined static and dynamic sealing, especially where high temperatures or extrusion resistance are involved. A continuous working temperature of 325°C (617°F) is possible, with short excursions at an even higher temperature also being acceptable.

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As an authorised DuPont™ licensee, Dichtomatik are able to offer advice and full technical support on problematic applications, and call upon a wide range of both standard and purpose engineered sealing products. Where application temperatures are limited to a maximum of 250°C (482°F) then they can also supply DuPont™ Kalrez® 0090 sealing products which compared with Kalrez® 7090 offer improved RGD resistance and chemical resistance to water and hydrogen sulphide.

Further information is available from:

Dichtomatik Ltd, Donington House, Riverside Road, Pride Park, Derby DE24 8HX

Telephone: 01332 524401

Fax: 01332 524425

e-mail: kalrez@dichtomatik.co.uk

www.dichtomatik-kalrez.co.uk

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*Dupont™ Kalrez® Spectrum 7090 seals, available from Dichtomatik Ltd, to provide high performance sealing in control valves for a wide range of process applications.*

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