Wellhead Sealing Guide

• Sealing solutions for the Oil & Gas industry
• Innovative technology offering safety, performance and reliability
• Global customer service and product support
The Oil & Gas industry

James Walker has long been committed to the provision of sealing solutions for the exploration and production of oil and gas.

Our capabilities in high performance materials science are relied upon worldwide by customers who need top quality materials that are validated and proven to operate:

- At extremes of pressure
- In chemically aggressive and physically abrasive environments
- Under rapid gas decompression (RGD) conditions
- In naturally occurring chemical / sour gas environments
- With large clearances and / or poor surface conditions
- To the highest performance specifications laid down by international industry
- With temperature cycling regimes
- At extremes of temperature
- Where failure could have significant health & safety, environmental or financial risk

The correct selection and specification of sealing materials and products is a prerequisite to the safe and effective operation of plant and the prevention of expensive downtime.

Please see the relevant James Walker guide for comprehensive product descriptions.

To get your copy, see the contact details on the rear cover, or visit our website www.jameswalker.biz.

Technology & innovation

- Working in partnership with the Oil & Gas industry for over 40 years
- In-house development of world-beating rapid gas decompression (RGD) resistant elastomers
- Confidential research projects both for and in partnership with clients
- Development of current best in class emissions control technology for valve stem sealing

Testing and verification

- We hold test equipment for all relevant ANSI, API, ASA, ASTM, BS, DIN, DTD, ISO and NATO standards
- Environmental chambers capable of replicating conditions from -70°C to +130°C
- Rapid gas decompression rigs – amongst the most advanced in the world
- Steam skid for testing seal design and materials under steam regimes
- Rotary and reciprocating test rigs with a variety of shaft sizes and speeds up to in excess of 6,000 rpm
- Chemical type-approval testing allowing customers the opportunity for third party-witnessed testing of elastomers and polymers in their anticipated chemical environment

General information

Health warning: If PTFE or fluoroeastomer (eg,FKM, FFKM, FEP) products are heated to elevated temperatures, fumes will be produced which may give unpleasant effects, if inhaled. Whilst some fumes are emitted below 250°C from fluoroeastomers or below 300°C from PTFE, the effect at these temperatures is negligible. Care should be taken to avoid contaminating tobacco with particles of PTFE or fluoroeastomers, or with PTFE dispersion, which may remain on hands or clothing. Material Safety Data Sheets (MSDS) are available on request.

Information in this publication and otherwise supplied to users is based on our general experience and is given in good faith, but because of factors which are outside our knowledge and control and affect the use of products, no warranty is given or is to be implied with respect to such information. Unless governed by type approval or contract, specifications are subject to change without notice. Statements of operating limits quoted in this publication are not an indication that these values can be applied simultaneously.

To ensure you are working with the very latest product specifications, please consult the relevant section of the James Walker website: www.jameswalker.biz.
Tie-down & lock-down screw packings

- Seals for bolts used to fasten and retain tubing & casing hangers
- Customised design to meet specific requirements
- Available in compressed expanded graphite, PTFE or moulded elastomers
- See JW elastomeric seals & components guide

Valve sealing and components

- Spring energised PTFE lip seals
- 'O' rings
- Metal and semi-metallic gaskets
- Valve bonnets
- Valve seat carriers
- Devlon® V-API thermoplastic seats and seat insert material
- PTFE, graphite, PEEK and nylon seats
- See JW valve sealing and emissions control guide

RotaBolt® assured tension control

- Bolt and nut dust tension control
- Positive terminal and indicating device
- Various methods of fitting devices
- Stainless steel or bronze
- Range of sizes
- Full materials traceability
- See JW bolted joint integrity guide

Moorside® API ring joints

- Metal seals for a wide range of high pressure and temperature applications
- Various methods of fitting devices
- Stainless steel or bronze
- Range of standard and custom designs
- See JW elastomeric seals & components guide

S' seals

- Extrusion-resistant double-acting seal for arduous static sealing duties available for internal or external groove applications
- Materials: tough HNBR or FKM elastomers
- Stainless steel anti-extrusion toroidal springs
- Wide range of sizes to fit standard SAE housings
- Validated to API 6A
- See JW elastomeric seals & components guide

MEC seals

- Hybrid metal/elastomer extrusion-resistant seals for high-pressure casing and tubing applications
- Makes accurate in-service seal change
- Energised by locating high performance elastomer
- Stainless steel or bronze
- Range of sections and sizes

Compression packings

- Extensive range of packing products for pump, valve, lid and gland sealing
- High integrity exhaust leak sealers
- Various methods of fitting devices
- Stainless steel or bronze
- Range of standard and custom designs
- See JW Compression Packings Guide

Specialist machined components

- Metal seals for a wide range of high pressure and temperature applications
- Various methods of fitting devices
- Stainless steel or bronze
- Range of sections and sizes
- See JW Moorflex metal seals and components guide

Valve sealing and components

- Spring energised PTFE lip seals
- 'O' rings
- Metal and semi-metallic gaskets
- Valve bonnets
- Valve seat carriers
- Devlon® V-API thermoplastic seats and seat insert material
- PTFE, graphite, PEEK and nylon seats
- See JW valve sealing and emissions control guide

Metalflex® spiral wound gaskets

- For pipe and vessel flanges in arduous temperature, flow or vibration conditions
- Various methods of fitting devices
- Stainless steel or bronze
- Range of standard and custom designs
- See JW Metalflex gasket technology guide

FS casing, tubing and 'P' seals

- Casing & tubing hanger packing
- For axial sealing against tubing or casing pipe
- Various designs available depending on application and service conditions
- Rectangular section of elastomer, with or without anti-extrusion elements
- See JW elastomeric seals & components guide

To order or for further details, please call your local contact shown on the rear cover or visit www.jameswalker.biz

Large Ø thin-walled machining capabilities