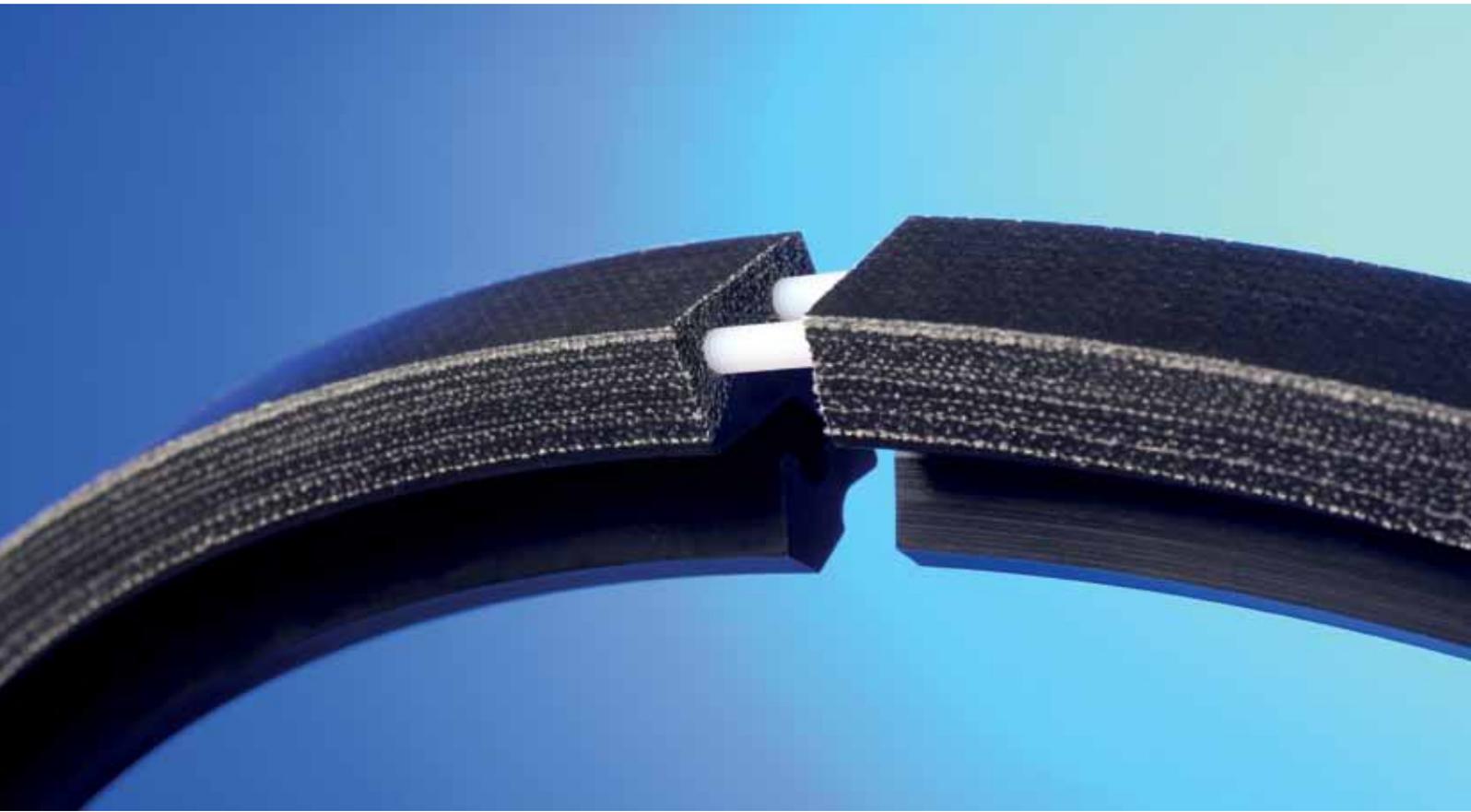


James Walker

Walkersele® OSJ On-site joining of rotary seals

Issue 7



- Reduce or eliminate requirement for equipment disassembly
- Performs as an endless seal
- On and Off-shaft fitting options
- Custom fitting options available
- Site survey and fitting service

High Performance Sealing Technology



On-site seal joining

High performance innovation

Walkersele® OSJ offers the best of both worlds, combining the ease and maintenance economies of split seal assembly with the fluid sealing performance of an endless seal.



The many user benefits of Walkersele OSJ include:

- **Cost effective maintenance** – the performance and integrity of an endless-type seal is achieved:
 - **without major plant stripdown**
 - **without expensive on-site vulcanising**
 - **without the need for specialist tools**
 - **without the need for specially trained fitters**
- **No compromise** – installed units provide the sealing performance of high-integrity endless Walkerseles
- **Worldwide proven** – thousands of seals in operation on marine propulsion systems, gearboxes, power stations, sugar refineries, etc...

Walkersele OSJ is available in three elastomer grades;

- Nitrile (NBR)
- Hydrogenated nitrile (HNBR)
- Fluorocarbon (FKM)

Other materials are available for specialist applications on request

The development of OSJ

For many years, on-site vulcanising was the only answer to split-seal assemblies where leakage was unacceptable, but this process could prove expensive, as it needed a high level of skill and elaborate jigs. So we developed Walkersele® OSJ.

The different OSJ® kits have been developed in partnership with customers across a variety of industries as we have looked to address maintenance issues they were encountering.

Our original OSJ system was designed to eliminate the need for total strip-down in order to replace a shaft seal – particularly important in saving time and considerable equipment costs for applications such as wind turbine main shafts, ship's propeller shafts and stabilisers.

The benefits of the OSJ system were immediately recognised by our customers but as they then sought to extend the benefits and savings of using the system to new applications, it became evident that a new methodology would be required. This was particularly the case where access was restricted, seals were particularly large in profile or couldn't be supported on the shaft whilst the joining procedure was carried out.

Faced with such challenges it was James Walker field engineers who created the new OSJ-D system, which now means that virtually any application requiring a Walkersele® can have a replacement seal fitted on site.



Walkersele® OSJ-2

Walkersele® OSJ-2 on-shaft fitting for standard applications

Where reasonable access can be gained to the shaft and housing the original OSJ®-2 system is the ideal option for on-site seal replacement.



Key features:

- Precision cut joining faces drilled for locating pegs and adapted for the joining process.
- Custom moulded silicone jig provides precise alignment of seal ends.
- Secure hold and accurate alignment during fitting procedure with twin-peg locating system.
- Shaft sizes 60mm to 2000mm (Consult James Walker Applications Engineering for advice on larger sizes).



Seal availability

Profiles:

Walkersele® OSJ-2 is supplied in all Walkersele designs that incorporate seal backs moulded from rubberised fabric.

The relevant profiles include our three leading designs, D6, D7 and D8, as well as the more specialised D1, D1/DL, D5, and D6/DL.

Materials:

Walkersele OSJ-2 is supplied in three main elastomer grades — nitrile (NBR), hydrogenated nitrile (HNBR) or fluorocarbon (FKM). For full information on all of our designs and materials, please see our Walkersele® Radial Lip Seals guide.

Temperature limit:

This is dependent on the seal material, but please note that the bonding technique imposes an upper limit of 150°C on the seal.

Sizes:

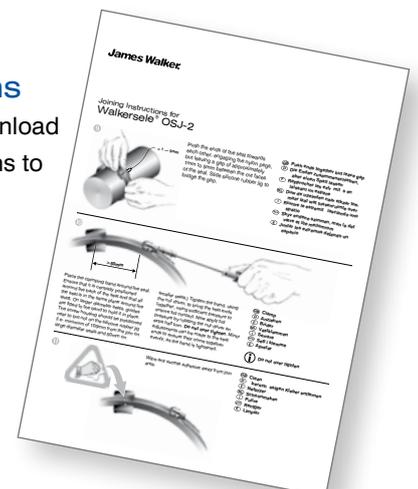
The latest OSJ seals are readily supplied for shaft sizes from 60mm to 2000mm. We also have special On-Site Joining techniques for seals outside this range, and for applications where space is limited. Please contact our Applications Engineering Team for advice.

Performance envelope:

If you need guidance, please discuss exact details of media compatibility, pressure, temperature and surface speed with our Applications Engineering Team.

OSJ®-2 Fitting Instructions

Scan this symbol to download detailed fitting instructions to your mobile or tablet



Walkersele® OSJ-D

Walkersele® OSJ-D off-shaft fitting for restricted access

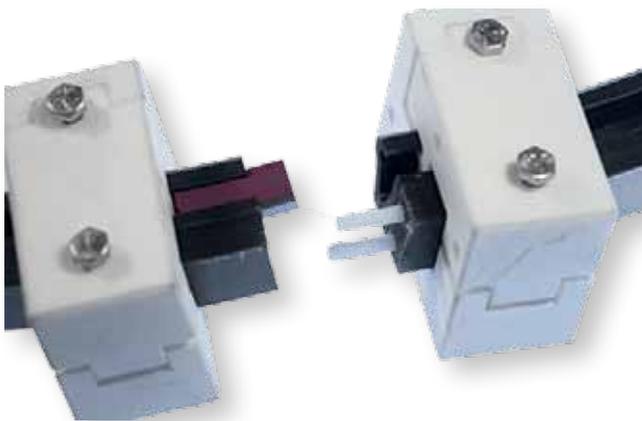
Where access to the shaft and housing is restricted for whatever reason, we have developed the alternative OSJ®-D fitting option.

Although the basic principles involved in the joining of the seal ends remain the same, a number of innovations have been made around the jig and clamping tool.

The new clamping blocks allow the seal to be successfully joined without being supported on a shaft. They hold the seal ends in place whilst bonding takes place where the use of the metal clamping band being applied around the outside of the seal to pull the seal together is not possible due to lack of access.

This new adaptation of the OSJ® method allows the seal to be joined and then manoeuvred into its housing even in cases where access may only be available through small inspection or access hatches.

- New OSJ-D clamping tool is available across a range of seal sizes / options.
- Individual seals are supplied with a custom silicone jig for precise location during the joining process.
- Seals provided with twin-peg locating system, offering accurate joint positioning.
- The clamping system and tool kit can be used for multiple installations of the same size of seal.

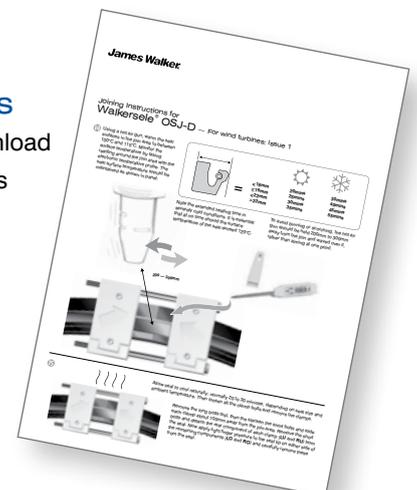


As with the Walkersele® OSJ-2 system, OSJ®-D is available for all Walkersele designs and in three grades of elastomer — nitrile (NBR), hydrogenated nitrile (HNBR) or fluorocarbon (FKM).

As this system also utilises the same adhesive, the bonding technique still imposes an upper operating temperature limit of 150°C on the installed seal. For further guidance on any aspect of on-site seal joining, please discuss your requirements with our Applications Engineering Team.

OSJ®-D Fitting Instructions

Scan this symbol to download detailed fitting instructions to your mobile or tablet



Technical assistance

Site surveys

Our Applications Engineering Team will advise you on the suitability of Walkersele® OSJ and fitting options for any specific shaft sealing application.

We have the capability to offer a detailed on-site survey through our field engineering teams to help assess and ensure that any access, shaft, bearing or housing irregularities are taken into account when specifying your replacement seals.

Our detailed order and manufacturing records, plus the capability of laser marking for product identification, simplify the task of re-ordering seals for existing applications.



Fitting service

As with any seal, correct fitting is essential if the seal is to operate correctly and provide a full and reliable lifespan.

The OSJ® fitting process is simple and although it can be carried out by your own maintenance and engineering personnel, James Walker is able to offer support if required, including;

- Emergency or scheduled maintenance
- Fully skilled engineers with extensive experience of rotary sealing applications
- Experienced in a broad range of applications including marine propulsion, wind energy and hydropower industries

Training

Although OSJ® can be fitted without the need for specialist skills or tooling, successful application of the OSJ technique relies on careful adherence to all stages of the joining process – as laid down in the detailed fitting instructions supplied with each kit.

We recommend that first-time users attend one of our hands-on training sessions that can be carried out at your premises, in the field or at one of our sites.



The James Walker training course provides an initial certification of competence which can then be maintained through regular refresher courses or supervision in the field by a James Walker engineer.

Technical advice

Expert technical advice on the best sealing technology solution for a specific application is always available from our Applications Engineering Team.



James Walker worldwide support & distribution

James Walker Asia Pacific

Tel: +65 6267 4788
Fax: +65 6267 4980
Email: sales.sg@jameswalker.biz

James Walker Australia

Tel: +61 (0)2 9721 9500
Fax: +61 (0)2 9721 9580
Email: sales.au@jameswalker.biz

James Walker Benelux

(Belgium)
Tel: +32 3 820 7900
Fax: +32 3 828 5484
Email: sales.be@jameswalker.biz
(Netherlands)
Tel: +31 (0)186 633111
Fax: +31 (0)186 633110
Email: sales.nl@jameswalker.biz

James Walker Brasil

Tel: +55 11 4392 7360
Fax: +55 11 4392 5976
Email: sales.br@jameswalker.biz

James Walker China

Tel: +86 21 6876 9351
Fax: +86 21 6876 9352
Email: sales.cn@jameswalker.biz

James Walker Deutschland

Tel: +49 (0)40 386 0810
Fax: +49 (0)40 389 3230
Email: sales.de@jameswalker.biz

James Walker France

Tel: +33 (0)437 497 480
Fax: +33 (0)437 497 483
Email: sales.fr@jameswalker.biz

James Walker Iberica

Tel: +34 94 447 0099
Fax: +34 94 447 1077
Email: sales.es@jameswalker.biz

James Walker Inmarco (India)

Tel: +91 (0)22 4080 8080
Fax: +91 (0)22 2859 6220
Email: info@jwinmarco.com

James Walker Ireland

Tel: +353 (0)21 432 3626
Fax: +353 (0)21 432 3623
Email: sales.ie@jameswalker.biz

James Walker Italiana

Tel: +39 02 257 8308
Fax: +39 02 263 00487
Email: sales.it@jameswalker.biz

James Walker Mfg (USA)

Tel: +1 708 754 4020
Fax: +1 708 754 4058
Email: sales.jwvmfg.us@jameswalker.biz

James Walker New Zealand

Tel: +64 (0)9 272 1599
Fax: +64 (0)9 272 3061
Email: sales.nz@jameswalker.biz

James Walker Norge

Tel: +47 22 75 75 00
Email: sales.no@jameswalker.biz

James Walker Oil & Gas (USA)

Tel: +1 281 875 0002
Fax: +1 281 875 0188
Email: oilandgas@jameswalker.biz

James Walker South Africa

Tel: +27 (0)31 304 0770
Fax: +27 (0)31 304 0791
Email: sales.za@jameswalker.biz

James Walker UK

Tel: +44 (0)1270 536000
Fax: +44 (0)1270 536100
Email: sales.uk@jameswalker.biz

Health warning: If PTFE or fluoroelastomer (eg, FKM, FFKM, FEPM) 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 fluoroelastomers 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 fluoroelastomer, or with PTFE dispersion, which may remain on hands or clothing. Safety Data Sheets (SDS) 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.

Environmental statement: This brochure is manufactured using advanced environmentally friendly technologies and follows the strict environmental standard BS EN ISO 14001. Made from chlorine-free pulp (ECF) with post-consumer recycled fibre obtained from sustainable wood forests, and printed using vegetable-based inks, by Binfield Printers Ltd. For those who wish to reduce further their impact on the environment, this publication is also available as a PDF from: www.jameswalker.biz.