ROTATING EQUIPMENT SEALING / TYPE 37FS SPLIT SEALS

TYPE 37

John Crane

New generation fully split seals compensate for shaft movement, without equal, to solve deflection/vibration problems

Patented design redefines split seal capabilities

"Solution-in-motion" split seals keep your most important equipment running longer

Exclusive compression ring makes adverse sealing conditions fully operable.

Proven split sealing technology for the 1990s...and beyond. New generation John Crane Split Seals correct chronic sealing problems without costly downtime.

Our split seals feature an exclusive design that enables them to flex and maintain positive sealing under the most trying conditions—large shaft deflections... high vibration levels...even major misalignments.

The key to our technology breakthrough is the advanced design of our elastomer compression ring. It provides unparalleled flexibility and continuous self-aligning for applications involving large rotating equipment.

It results from John Crane's 30 years of experience with split seals for marine and heavy industrial applications...plus computer-generated finite element analysis and our dedicated elastomer expertise.

Sealing solutions for the most difficult applications

John Crane Types 37FS and 37FSB Split Seals are made for the toughest situations. For critical equipment that cannot be shut down for long periods. For complex equipment that is difficult to dismantle. For sealing equipment handling liquids with a high solid concentration, slurries and abrasives.

Our unique fully split seals are proven in pulp and paper refiners, pulpers, agitators, pumps... refinery and chemical/petrochemical agitators, blenders...food, beverage and pharmaceutical mixers... power generation flue gas desulphurization units, wastewater treatment raw sewage pumps, mining slurry pumps.

Split Seals improve productivity, reduce costs

Our Types 37FS and 37FSB Split Seals have no problem with out-of-square, rough, pitted, and rusted stuffing boxes typically found on older equipment. Our seals:

- Extend equipment life and minimise unscheduled downtime
- Eliminate product loss during normal operation and reduce seeping or gushing leakage clean-up time and costs
- Reduce power consumption

Performance that's in a class by itself

While other split seals have severe limitations in misalignment and deflection situations, John Crane Split Seals handle the toughest sealing challenges...readily.

- Radial shaft movement to ±.124"/3.0mm T.I.R.
- Shaft runout to .020"/0.5mm T.I.R.
- Stuffing box waviness to .030"/0.7mm T.I.R.
- Axial end play to .060"/1.5mm T.I.R.
- Squareness of stuffing box face to shaft to .100"/2.5mm T.I.R.

AFTER

TYPE 37

Patented design...a masterpiece by design

Simplicity...by design; minimal components maximize results

- **easy installation**
- **easy maintenance**

Installs easier...with no equipment modification

Fewer components, fully split design and self-aligning capabilities make installation fast and easy with our Types 37FS and 37FSB.

No need to take apart casing, dismantle equipment, remove bearings...or reassemble and realign equipment.

There are no little springs to cause installation troubles or get lost. And, our new generation fully split seals have just seven components. They truly are masterpieces ...by design.

Unlike packing, our Types 37FS and 37FSB Seals are outside mounted. No need to change or replace an existing sleeve, even if it is badly worn. For unique equipment, any necessary adaptive hardware is supplied with the seal.

Outside mounting permits easy monitoring of seal performance and sealing conditions.

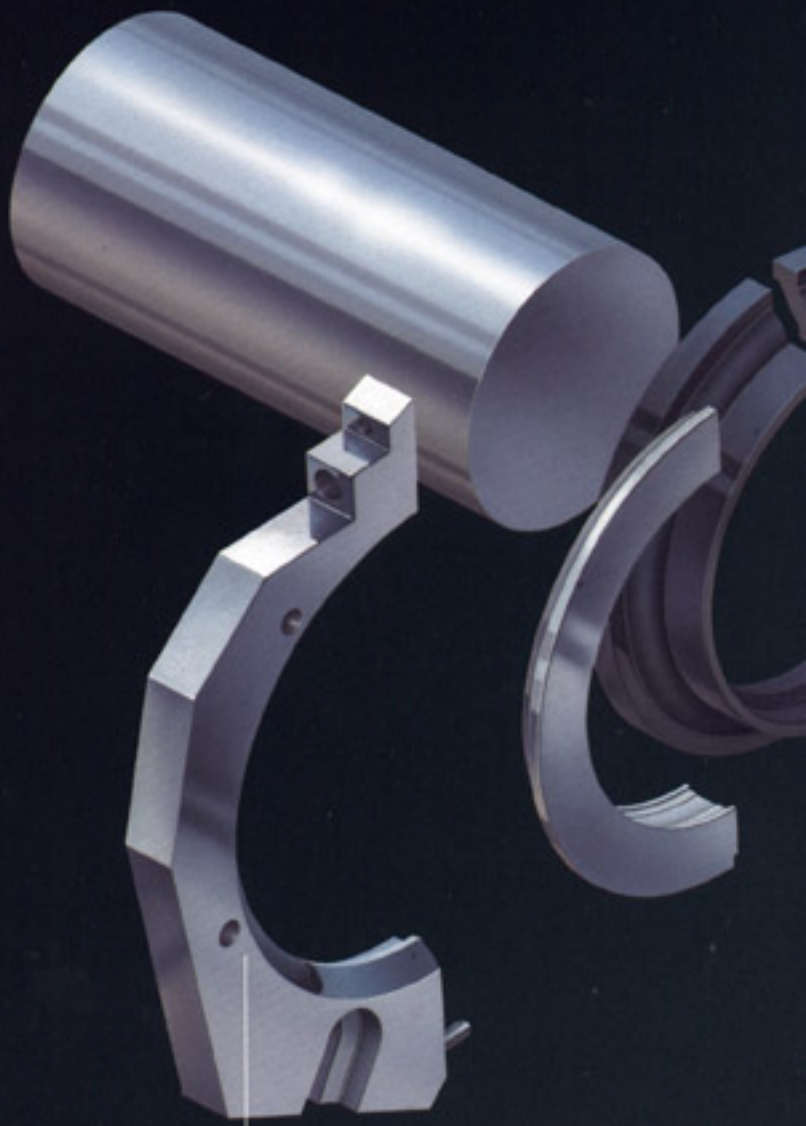
Materials of construction selection is extensive

Flexibility in performance is an optimised attribute of our unique split seals. So, too, is flexibility in selection of application-specific materials of construction.

- Silicon carbide vs. silicon carbide
- Carbon vs. silicon carbide
- Carbon vs. tungsten carbide

...and more.

Seal hardware in 316 stainless steel is standard, with any other commercially available metal as an option for a broad range of services.



Slotted Gland Plate
Easily fits wide range of stuffing boxes in many types of hard-to-seal equipment.

Your John Crane Sales/Service Engineer can recommend the best materials of construction for your exact equipment and service conditions.

Field repairable to guard your seal investment

Our split seals can be brought back to original specification on-site or at any John Crane Seal Rebuilding facility the world over.

Fully split Type 37FS
Seal is easy to install in large, difficult-to-seal equipment.

Patented design redefines split seal capabilities

Type 37FS Split Seal companion — Inflatable backup seal guards product during repairs, maintenance

Type 73 "The Protector" solves production and product loss problems

John Crane Type 37FS or Type 37FSB Split Seals and Type 73 Inflatable Seals work together as a perfect system to guard product.

The Type 73 is a backup seal that inflates to hold product in place — without leakage — during emergency repair and scheduled maintenance for rotating shaft equipment.

These seals are designed for paper mill batch and continuous process applications, refineries, chemical/petrochemical processes and similar processes in industry.

Our Type 73 Seals are the newest generation of inflatable seals that John Crane has supplied for marine and industrial applications for the past 30 years. Today, John Crane Inflatable Seals in sizes from 2" to 45"/51mm to 1143mm, are in service.

The Types 37FS/FSB and Type 73 sealing integrity relies heavily on John Crane expertise in elastomer technology.

Sealing system protects against product loss and downtime

A Type 73 Seal is positioned between the product in the tank/vessel and a Type 37FS or Type 37FSB Split Seal. This combination of sealing technologies, provides assured batch protection for mixers, agitators, stock chests, large pumps and other vessel equipment.

During an equipment malfunction or scheduled maintenance, the elastomer component of this seal inflates quickly to hold product in the tank reliably.

There is no need to drain tanks and systems in critical equipment. Other problems resolved include:

- Days of lost production
- Lost product
- Hazardous situations

Designed to last for years, Type 73 Seals can be inflated/deflated through virtually endless cycles.

A. Before: Deflated Condition

B. After: Inflated Condition

The John Crane difference in sealing performance

Consult with your nearby John Crane Sales/Service Engineer about your equipment sealing needs. Our solutions are application-specific to serve you and your process better.

- New generation split seals and inflatable backup seals.
- Greatest breadth and depth of line in shaft-mounted and cartridge mechanical seals.
- Three types of non-pusher bellows seals—elastomer, PTFE and metal.
- Dry-running gas seals for process compressors, turbines, blowers, fans and other industrial equipment.
- Non-contacting steam turbine driver seals.
- Fluid control systems to guard your equipment, your production and the environment.
- Professional training and skills development in mechanical maintenance.

The exclusive John Crane network of Seal Rebuilding facilities staffed by factory-trained specialists and equipped with leading edge machinery assure longer peak performance seal life, profit-guarding preventive maintenance, reduced production downtime, and seal inventory reduction.

John Crane

John Crane International

Our experience is your expertise.

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