Time to rethink what your packing is capable of

SpiralTrac™

PACKING VERSION

EnviroSeal Engineering Products Limited
WHAT IS SPIRALTRAC™?

The SpiralTrac™ Environmental Controller is a unique, patented throat bushing specially engineered to transform and control the internal stuffing box environment in rotating process equipment.

TYPICAL PACKED PUMP PROBLEMS

1. Shaft/Sleeve erosion
2. Trapped Particulate
3. Premature packing failure
4. Excessive Effluent Water

Flux Costs
- Effluent treatment, re-heating costs

Maintenance and repair costs
- Frequent shaft, sleeve and packing replacement
- Labor intensive – time consuming
- Housekeeping issues - process leakage

Many equipment types
- Different processes - different problems

THE SPIRALTRAC SOLUTION

1. Improves Equipment MTBF
2. Reduces the amount of flush needed by 60% or more with the use of a flow controller
3. Reduces leakage to clean drip rate or better
4. Improves packing performance & extends packing life

Packing Version SpiralTrac™ Benefits

Flush can be reduced by 60% or more in many applications with the use of a flow controller

Through the use of tangential injection into a centrifugal separation chamber, and the incorporation of spiral grooving, SpiralTrac Version P is able to use flush far more effectively and efficiently in rejecting particulate from the pumpage.

Less Leakage

The packing used with SpiralTrac Version P must be of a high quality that will enable control of leakage to a drip rate. This results in a far cleaner working environment, longer bearing service life, and reduced housekeeping costs. EnviroSeal recommends high quality Chesterton packing.

The packing set is less sensitive to dirt in the flush water

The dirt is injected with the flush and forced under one or both sets of packing, contaminating the inner surface and scoring the shaft in the process. SpiralTrac Version P collects this dirt and channels it from the chamber through a dedicated exit groove.

Greatly reduced sleeve wear

Dirt from flush is rejected instead of imbedding in the packing. As well, most of the dirt attempting to enter the packing set from process is captured in the spiral grooving system and rejected with the flush before it can embed under the packing rings above the SpiralTrac. The combination has proven to dramatically reduce sleeve wear, and in turn make the sealing system less sensitive to axial and radial movement.

Longer Packing Life

SpiralTrac Version SpiralTrac finally enables the economic use of high-grade packing, enabling users to gain the advantages of their inherent ability to operate longer, with less leakage, and less sleeve wear.

Cleaner Leakage

One of the most frequent reports from the field is the comment that the leakage from the packing set is not only reduced to drip rate, but that the contaminant level within the leakage is astonishingly low. This again translates to massive visual and house cleaning benefits to the user.

The proven solution to packing large rotating equipment

SpiralTrac Version P has provided a long-awaited answer to the problems associated with packing and maintenance of not only pumps and mixers, but for large rotating equipment where the benefits have been even more evident. This equipment has included agitators, refiners, hydro pulpers, and thick stock pumps.
### MATERIAL OPTIONS

<table>
<thead>
<tr>
<th>Material</th>
<th>ENV ID</th>
<th>Max Temp</th>
<th>Application Information</th>
<th>Common use in Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass Filled PTFE</td>
<td>GLF</td>
<td>250°F / 121°C</td>
<td>Engineered &quot;white&quot; Polymer typically used in applications where process fluid is white.</td>
<td>Pulp and Paper</td>
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<tr>
<td>Carbon Graphite PTFE</td>
<td>ESC</td>
<td>250°F / 121°C</td>
<td>Engineered Polymer used in a wide variety of applications.</td>
<td>Chemical, Commercial Water, General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
</tr>
<tr>
<td>Prolon PPS</td>
<td>MGE</td>
<td>500°F / 260°C</td>
<td>High Performance Polymer suited for applications where intermittent shaft support is required.</td>
<td>Chemical, Commercial Water, General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
</tr>
<tr>
<td>Bearing Grade PEEK</td>
<td>BGE</td>
<td>500°F / 260°C</td>
<td>High Performance Polymer designed for applications that require maximum shaft support.</td>
<td>Chemical, Commercial Water, General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
</tr>
<tr>
<td>Poly-Urethane</td>
<td>STR</td>
<td>185°F / 85°C</td>
<td>Excellent wear properties for slurry services.</td>
<td>Mining, Power, Steel, Wastewater</td>
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<tr>
<td>Bronze 860/202</td>
<td>BRZ</td>
<td>n/a</td>
<td>Good wear properties. Material is non-sparking and will absorb moderate shaft deflection without damaging the shaft.</td>
<td>General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
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<tr>
<td>316 Stainless Steel</td>
<td>316</td>
<td>n/a</td>
<td>Used in corrosive services.</td>
<td>Chemical, Commercial Water, General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
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<tr>
<td>416 Stainless Steel</td>
<td>416</td>
<td>n/a</td>
<td>Ideal for erosive services where chemical compatibility is not an issue.</td>
<td>Chemical, Commercial Water, General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
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<tr>
<td>17-4 Stainless Steel</td>
<td>174</td>
<td>n/a</td>
<td>Ultimate wear resistance for tough slurry services.</td>
<td>General Manufacturing, Mining, Power, Pulp &amp; Paper, Steel, Wastewater</td>
</tr>
</tbody>
</table>

For exotic materials and material recommendation please contact EnviroSeal at info@enviroseal.ca

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### TIGHT CLEARANCE FOR ADDED SHAFT SUPPORT

**PROBLEM**

Shaft movement, shaft deflection, shaft vibration

**SOLUTION**

Tight Clearance for added shaft support resulting in extended packing life.

Faster, easier, more effective packing maintenance.

Dramatically reduces direct and indirect costs associated with the operation of rotating process equipment.

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### SPIRALTRAC RED MATERIAL FOR SLURRY APPLICATIONS

The SpiralTrac Version P is available in an optional Red Polymer (STR) material ideally suited for rubber lined slurry pumps.

Split configuration for easy installation.

STR is highly resistant to abrasion.
Flush Injection Restricted SpiralTrac Technology

FIRST DEVICE

Packing Version SpiralTrac with built in Flush Restriction and Shaft Support, all the while maintaining the patented and well proven SpiralTrac Technology.

Significant flush water savings without the use of flow controller!

Installation Consideration

The sleeve must be in good condition to maintain pressure. Flush must be clean to maintain the close clearance required. Minimum axial length required for the FIRST Device is 2" (50 mm).

No pump modification required.

Eliminates the need for troublesome flow controls.

Low Cost enhanced sealing solution for equipment that is already packed.

Available in high performance polymer suited for applications where intermittent shaft support is required.
Home of SpiralTrac™

EnviroSeal Engineering Products Ltd. is a pioneering leader in seal and packing protection technology, offering several patented product families that enhance operating conditions and dramatically increase the service life of mechanical seals and packing in the pulp & paper, mining, API, CPI, municipal, pharmaceutical, marine, food processing and other general heavy industries worldwide.

Mission Statement

Our mission is to research, design and produce creative and leading-edge seal protection technology for distribution and use worldwide in any process industry. Our hallmark will be excellence of service, ingenuity in design and quality of product, thereby resulting in the greatest possible benefits and savings for our customers.