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## SpiralTrac™ Throat Bushing

# SELECTING VERSIONS AND INSTALLATION TYPES

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### **SELECTING VERSIONS (DEVICE APPLICATION)**

#### **Version F**

**(Flush only, split)**

- Used only with flush typically 5-8 gph (0.3 - 0.5 lpm).
- Version F is always specified with split types. Since split devices are intended for installation with the pump in place, the pump cannot be modified to incorporate the air vent or exit groove extension required for flush free operation.

#### **Version N**

**(Small/no flush, non-fibrous application)**

- Used with a small flush or no flush in Non-fibrous applications. Should be the version specified for seals whenever non-fibrous contaminants are handled and the equipment will be disassembled for installation.
- In Pulp & Paper - acids, caustics, liquors, etc.- normally in 316SS.
- In Mining – slurries, chemicals, water intakes, etc.

#### **Version D**

**(Small/no flush, fibrous applications)**

- Used in fibrous (paper stock) applications with a small flush, 5-8 gph (0.3-0.5 lpm), if the product is aerated and single seals are used, or with no flush. (If uncertain, start the pump with the flush and decrease slowly. If the gland heats up the stock is aerated, turn the flush back on.)
- Available in 316/416SS, ESC (Carbon-graphite, ceramic-filled PTFE)

#### **Version C**

**(Small/no flush, chemical applications)**

- Used with a small flush or no flush in chemical service applications.
- Unique drain machined in bottom to effectively drain seal cavity.
- Available in Type I only.

#### **Version P**

**(Packing)**

- Used with packing to reduce: flush, leakage, wear, and maintenance costs.

## **SELECTING TYPES (INSTALLATION CONFIGURATION)**

SpiralTrac must fit into each pump configuration and therefore, must be available in several basic shapes to fit the majority of chambers. In each case, whether flush is necessary or not is dependent upon the nature of the product, whether there is air in the product, and if the air vent and exit groove are extended through to the impeller.

### **Type I**

This is the favored installation for open or taper bore pumps, or where machining can be done. The SpiralTrac is simply pressed into position from the impeller side for flush free capability if the fluid is not aerated. The exit groove and air vent are integral to the device, only a simple upgrade is necessary for installation.

### **Type B**

In applications with flush... simply press the SpiralTrac Type B through the chamber to rest against the throat. It will draw abrasives away from the bore and seal, and present them at the shaft, where the flush can push them under the throat (if they will fit). Installation types I and A, are favored for flush free operation, because of the difficulty in extending the exit groove through the cast in throat with type B.

### **Type A**

SpiralTrac Type A is used to replace existing removable bushings. Simply remove the existing bushing, drill a 5/32" (4 mm) air release hole at the top of the partial throat, and insert the SpiralTrac by pressing through the chamber. An optional design fits under a very small counter bore step (throat), and incorporates the air vent within its outside surface.

### **Type S**

The Type S designates a design that is axially split for mounting into the chamber without disassembling the equipment. This would be used when a split seal is to be changed, or installed to replace packing, while the pump still in place. Because no air vent or exit groove extension can be incorporated while the pump is in place, a small flush is required. The Version P, which is also available split, is used to replace the bottom rings of packing and the lantern ring. With both, it is necessary to ensure that the size of contaminant expected in the flush will pass under the cast in throat. (If the equipment is to be disassembled to mount a split seal, the use of installation types I, A, or E are recommended for the increased flexibility and security.)

### **Type E**

The Type E is configured to fit into horizontal split case pumps to replace the OEM bushings often found in these type of pumps. They usually incorporate an external flange to match a corresponding groove in the pump casing. The air vent and exit groove are normally contained within the SpiralTrac design, but depending upon the configuration of the pump, a hole may have to be drilled. The exit groove normally extends completely through to the impeller side.