



**blac inc.**

BLACK LIMITED ADVANCED CONTROLS

has completely changed 70 years of FCC slide valve design with our development of the patented **TightCat™ Slide Valve.**

The first FCCU slide valve designed and tested to provide ANSI Class IV shutoff.

## TightCat Benefits

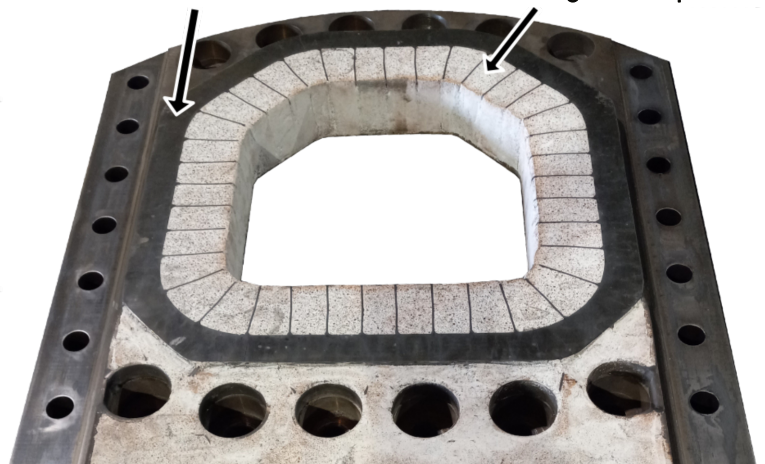
### Compared to Standard Slide Valves:

- Reduces gas and catalyst leakage to near zero
- Eliminates unintended air, steam or hydrocarbon movement through valve
- Reduces reliance on operating procedures to mitigate risk during startup and shutdown
- Additional *Layer of Protection* for the FCCU
- Mechanically more robust and reliable by design
- More overlap in closed direction
- Valve only shuts off tightly in the fully closed position
- All pressure drop areas are the same as any modern FCCU slide valve

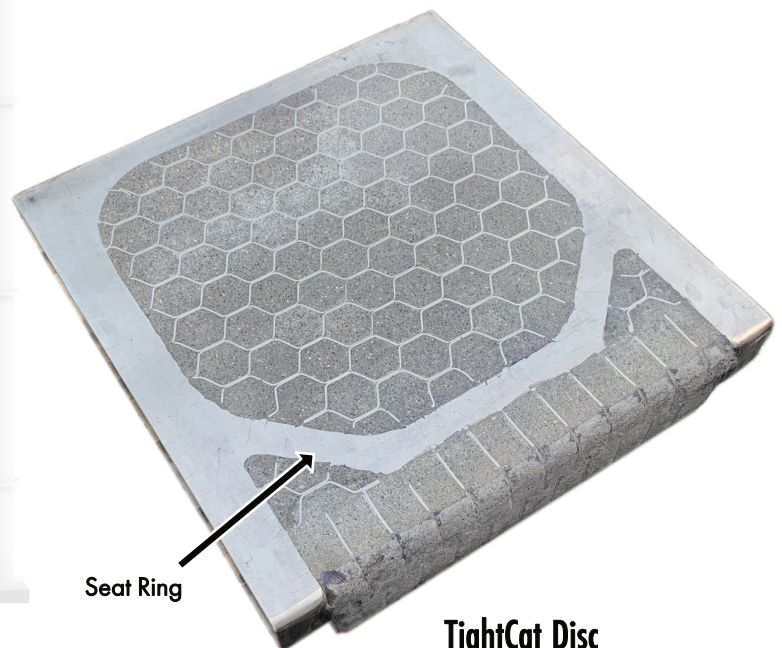
### TightCat Design Features:

- Mating seat rings on bottom of orifice plate and top of disc
- Thicker and taller guides
- Bolted guides with recessed bolt holes and V-notches
- Full Stellite overlay on guides
- Larger disc to accommodate seat ring

Stellite on orifice plate seat mates to disc seat ring  
3" (75mm) Abrasion resistant lining around port



**TightCat Orifice Plate (looking from underside)**



Seat Ring

**TightCat Disc**

## TightCat Internals

**TightCat** achieves tight shutoff by engaging the seats only in the last portion of disc travel. The high gas velocity just prior to the full shutoff position clears out catalyst between the seat rings, achieving tight shutoff.

For any valve position not fully closed, **TightCat** behaves exactly like a typical slide valve, but with more overlap in the closed direction.

**TightCat** meets all major licenser mechanical specifications.



## TightCat Testing

Hot stroke tests were performed at 1500° $F$  (800° $C$ ) to prove reliability of movement.

Leak tests performed per the *ANSI/FC 70-2-2013 (Control Valve Seat Leakage)* standard to prove ANSI Class IV shutoff.

Hot stroke and leak test certificates can be provided on a per project basis.

Consult **BLAC INC. Sales** for more info.

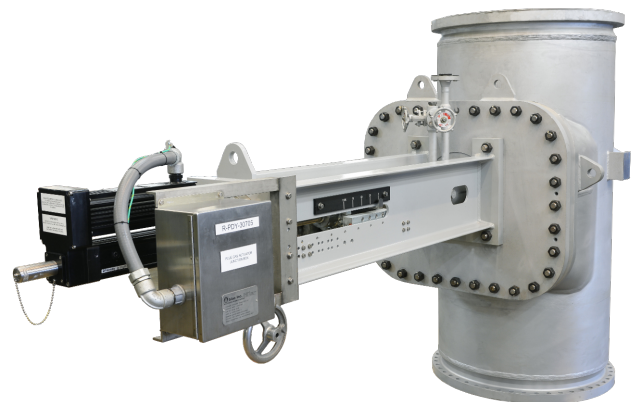
## Ultimate Reliability

The **TightCat** design has been proven in an extremely difficult FCCU service since March 2019. Since 1990, **BLAC INC.** has provided consistent reliability through product strength and durability that far surpasses the competition. With the innovation of **TightCat**, **BLAC INC.** has continued its commitment to incorporating safety of the plant and personnel into its designs, along with providing the **ultimate reliability** of our products to plant operation.

## Testing Data & Video Demonstration

[www.blacinc.com/tightcat](http://www.blacinc.com/tightcat)

Get TightCat™ Information at  
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