



# Oil Sands

Quality Valve Products Designed  
Specifically for the Oil Sands Industry



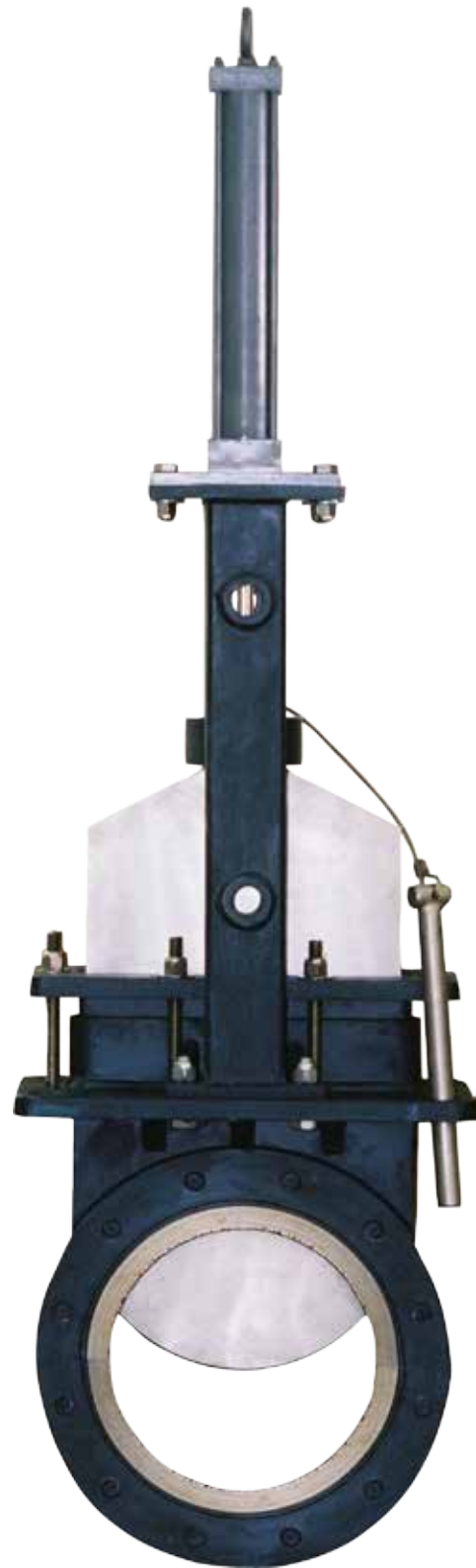
**ITT**

ENGINEERED FOR LIFE

# ITT Valve Capabilities

ITT is a global leader with 65 years of experience in the design, manufacture and fabrication of engineered valves. ITT's leadership has resulted in vast experience with fluid handling, with precise expertise in specialized knife gate valves. Over the years we have developed a unique range of valves that are designed to handle the broad range of applications that are present in the Oil Sands industry. From valves used to handle water for ore preparation and production, to moving aggressive and abrasive slurries, to transporting diluted bitumen to be upgraded, ITT Engineered Valves products are used in almost all fluid applications in the production of bitumen.

Supported by our facilities around the world, ITT truly is a global manufacturer, supplier and industry leader. ITT understands that each bitumen production site has different, but specific production requirements. We approach each customer with the confidence that ITT has the correct product to fulfill even the greatest challenges in valve applications. Accordingly, ITT's knife gate valve portfolio offers great flexibility in providing solutions to the most demanding and critical process challenges.



## Tired of replacing an entire valve?

### Highly Engineered Solutions for Critical Applications

Our products and solutions are not commodities or off-the-shelf products, but customized solutions that solve complex problems where the cost of failure is significant.

Whether handling relentlessly abrasive bitumen slurries or corrosive chemicals, ITT offers durable, reliable and innovative industrial solutions with high value and low life-cycle cost to customers around the globe.

In applications where extremely rugged valve design is absolutely necessary, such as hydrotransport or bitumen extraction, the ITT HD150/300 valve is the valve of choice.

Replaceable seats are designed with tough applications in mind. These types of seats provide the user with the ability to extend the service life of the valve body by protecting it from the rigors of the flowing slurry inside the valve. Replaceable seats are either held in place by the opposing pipe flanges which gives the user the ability to extend the service life of the seats, or mechanically retained by fasteners that secure the seats to the valve body.

The choices of materials of construction for the seats and gates are endless. Typical material choices for HD150/300 valves installed in applications related to bitumen extraction are:

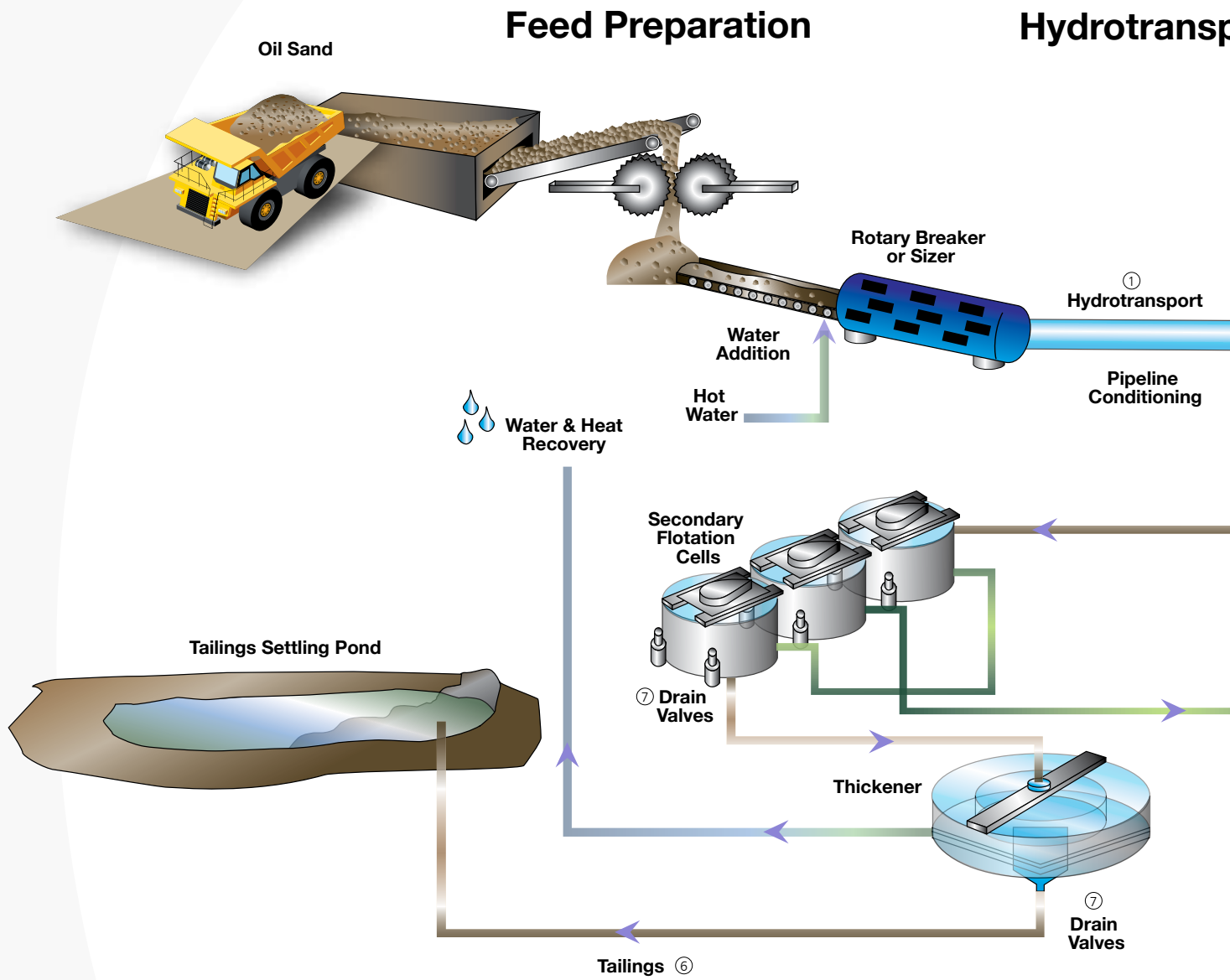
- 17-4 PH stainless steel which is a heat treated stainless steel used for gates which provides increased hardness and strength. The results are increased abrasion resistance and decreased gate deflection.
- Tungsten carbide and chrome carbide overlays are available for increased levels of abrasion and corrosion resistance. These overlays typically are applied to the wetted surfaces of the wear rings.

Other inherent design features that make the HD 150/300 well suited for the harsh application in Oils Sands include:

- Bi-Directional design allows the valve to perform in either direction of the media flow.
- Six rows of packing with dual scrapers provide exceptional fluid and pressure containment.
- Safety gate locking pin, gate clamps and yoke assemblies are designed to resist the maximum thrust output from the selected 3000 psi hydraulic actuators.

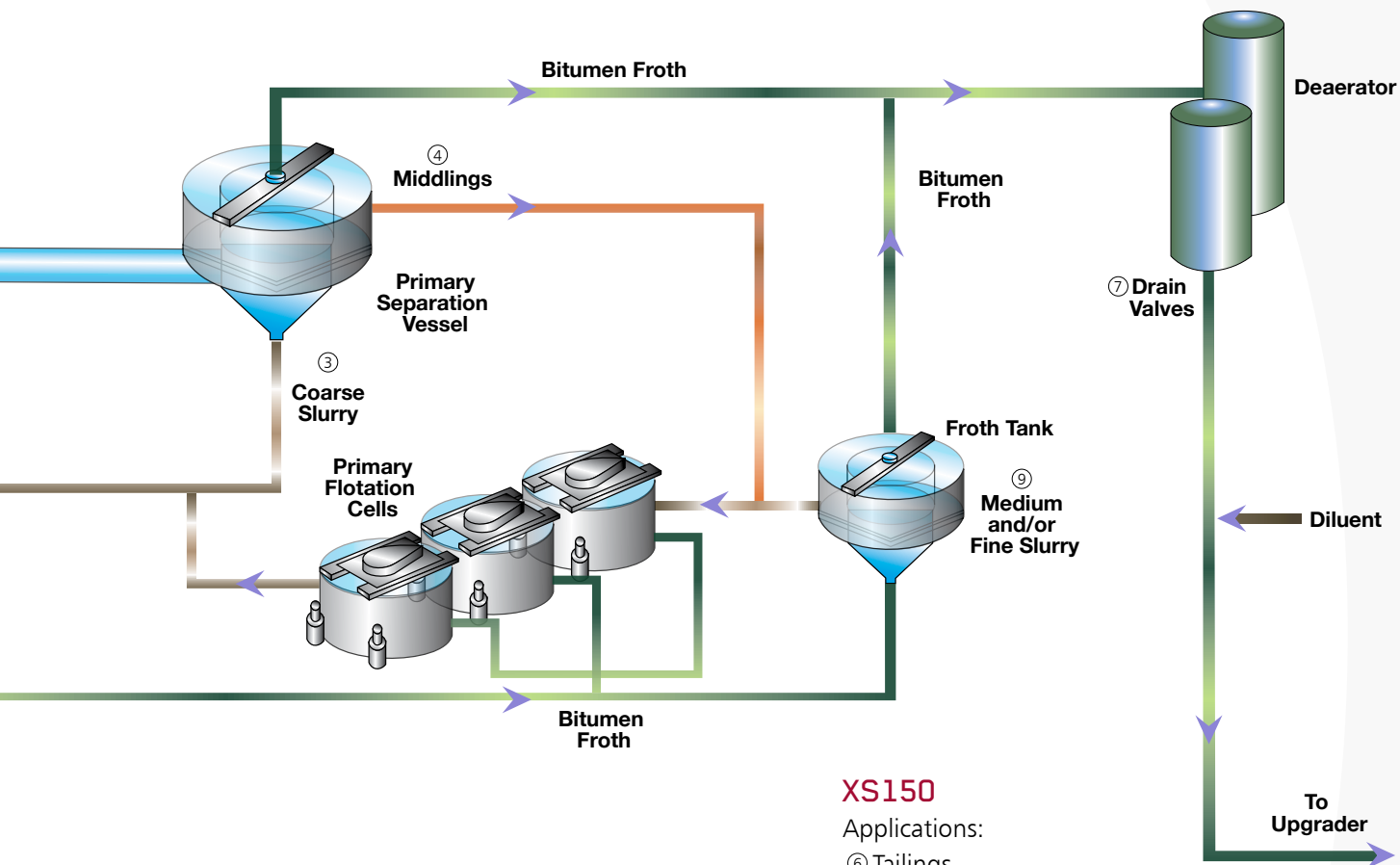


# Oil Sands



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# Extraction



## HD 150/300

Applications:

- ① Hydrotransport
- ③ Coarse Slurry
- ④ Middlings
- ⑥ Tailings
- ⑦ Drain Valves
- ⑨ Medium and/or Fine Slurry

The HD150's & HD300's were specifically designed to withstand abrasive, high pressure, Oil Sands slurries. The Fabri-Valve Heavy Duty (HD) valves are pressure rated to ANSI Class 150 and 300. This valve can also be used as a double block & bleed and is bi-directional.



## XS150

Applications:

- ⑥ Tailings
- ⑦ Drain Valves
- ⑧ Froth
- ⑨ Medium and/or Fine Slurry

The XS150 Knife Gate Valve has a one piece perimeter design that provides superior valve performance and a longer installation life in severe service applications. The one-piece perimeter seal provides bi-directional bubble tight shutoff. The Fabri-Valve XS150 is a perfect solution to the common problems of performance and longevity that typically plague knife gate valves in harsh operating conditions found in the Oil Sands.



# Oil Sands

## Fabri-Valve Fig 33/133 Knife Gate Valve

Applications:

- ② Flush/Dilution Water
- ⑧ Froth
- ⑨ Medium and/or Fine Slurry

The Fig 33/133 is a slide gate design with a unique gate support system that reduces stress on the seats. The seats are in constant contact with the gate. The valve has body liners to reduce compression set of the seats and provides true bi-directional drip tight shut-off.



## Fabri-Valve Fig 37 Knife Gate Valve

Applications:

- ④ Middlings
- ⑤ Froth
- ⑥ Tailings
- ⑦ Drain Valves
- ⑨ Medium and/or Fine Slurry

The Figure 37 is the workhorse of the Fabri-Valve product line. This valve meets or exceeds MSS standards for knife gate valves.

- Seats can be integral metal for basic applications or D-rings for services that require bubble tight shut-off.
- Drop in replacement type seats can be used for more abrasive applications.
- Backing rings can be specified for reverse flow conditions.



## Fabri-Valve Fig 39 Knife Gate Valve

Applications:

- ④ Middlings

The Fig 39 is a slide gate valve designed for shutoff and throttling in difficult and/or high solids slurry service. This valve is also designed to operate in a static column of solid particles and powders. It performs extremely well in middlings applications.



## Fabri-Valve Fig 45 Knife Gate Valve

Applications:

- ② Flush/Dilution Water
- ④ Middlings
- ⑥ Tailings
- ⑦ Drain Valves
- ⑧ Froth
- ⑨ Medium and/or Fine Slurry

The Fig 45 is designed for aggressive solids. The valve comes with a variety of drop in style replaceable seat options. The seats can be easily replaced in the field.



## Fabri-Valve Fig C67

Applications:

- Flush/Dilution Water
- Drain Valves
- Froth
- Medium and/or Fine Slurry

Performance with an intense emphasis on rigorous standards. That's what you'll achieve with the proven bubble-tight, bi-directional action of the C67. Fabri-Valves' "Energized Packing" provides sealing performance well beyond traditional knife gate valves.



Other fluid handling products from Engineered Valves Group include:

- Skotch Safety Shut-off Valve System
- Dia-Flo Diaphragm Valve
- Dia-Flo Straightway Valve
- Cam-Line ETFE Lined Products



Skotch Safety Shut-off Valve System



Weir Diaphragm Valve



Straightway Diaphragm Valve



ETFE Lined Ball Valve

For more information regarding these products go to [www.engvalves.com](http://www.engvalves.com)

Valve Model	Water	Slurry		Froth	Bitumen	Middlings	Tailings	Drain Lines	Pressure		
		Fine	Coarse						150 psi CWP	ANSI Cass 150 (285 psi)	ANSI Class 300 (740 psi)
HD-300	X	X	X	X	X	X	X	X	X	X	X
HD-150	X	X	X	X	X	X	X	X	X	X	
33/133	X	X	X	X	X	X		X	X	X	
F39	X	X		X	X	X		X	X		
C37	X	X		X	X	X	X	X	X		
C67	X	X		X	X	X	X	X	X		
C134	X	X		X	X	X	X	X	X	X	
XS150	X	X		X	X	X	X	X	X	X	
OM150	X	X		X	X	X	X	X	X		
C45	X	X		X	X	X	X	X	X		
33PTA	X	X	X				X	X	X		
33PTD	X	X					X	X	X		

Valve Model	Valve Specifications and Options										
	Use in Uni-Directional Flow	Use in Bi-Directional Flow	On-Off Operation	Modulating Operation	Metal Seat (Class IV)	Resilient Seat (Class VI)	Replaceable Seats	Locking Device	Hardened wear surfaces	Deflection Cone	Gate Coating
HD-300	X	X	X		X	*	X	X	X	O	O
HD-150	X	X	X		X	*	X	X	X	O	O
33/133	X	X	X		O	X	X	X	O	O	O
F39	X	X	X	*	X	O	X	O	O	O	O
C37	X	X	X		X	O	O	O	O	O	O
C67	X	X	X			X	X	O	O	O	O
C134	X	X	X		X	O	O	O	O	O	O
XS150	X	X	X			X	X	X	O	O	O
OM150	X	X	X			X	X	X		O	O
C45	X	X	X		O	X	X	O	O	O	O
33PTA	X	X	X			X	X	O			
33PTD	X	X	X			X	X	O			

X - Standard Feature  
O - Optional Feature

Visit our website at  
[www.engvalves.com](http://www.engvalves.com)



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