



# Large Custom Valves

Designed to be the best valve for the job



# ITT

ENGINEERED FOR LIFE

# ITT Engineered Valves Capabilities

ITT Engineered Valves is a global leader in fluid handling with over 65 years of design, manufacture and application of highly engineered valves. These valves provide engineered solutions for slurry, water/wastewater, power generation, and other industrial markets.

Customers around the world depend on ITT Engineered Valves to provide them with the most engineered, reliable, and cost effective valves in the market. We are a full service partner with a hands-on approach to solving your unique valve requirements across the globe and across many industries..

We know from our design and application expertise and our vast installed base that we have the right product to fit the most challenging valve application. Whether it's a 134 in. valve for a fish ladder system in Laos or an 84 in. valve in a cogeneration flu gas application in Michigan we have the right solution for your application.

Our valves provide:

- Better valve performance in all applications
- Less unscheduled maintenance downtime
- Improved plant performance and pipeline reliability
- Safety for operators

ITT Engineered Valves designs and builds valves every day to help minimize our customers' total cost of ownership by ensuring that all our valves are manufactured to the highest standard and tested to perform at their best.



**ITT engineers do not fit the application to the valve, but design the valve to the application.**

## Applications:

### Mining

- Milling Circuit
- Cyclone / Sizing
- Chemical Addition
- Flotation Separation
- Clarifiers and Filtration Separation
- Tailings
- Thickeners and Water Recovery

### Power

- Demineralizer
- Condensate Polisher
- Coal Mill and Pulverizer Isolation
- Fly Ash and Bottom Ash
- Flue Gas Desulphurization
- Nuclear (Radioactive Service)

### Water/Wastewater/Municipal

- River In-Take Lines
- Effluent Discharge Lines
- Sludge Processing
- Filtration Systems
- Pump Isolation
- Lift / Pumping Stations
- Deep Tunnel Pumping

### Industrial

- Chemicals - Corrosive Chemicals, Powder and Pellet Conveying
- Abrasive Slurries - Lime, Paint, Clay, Sewage, Silica, Heavy Water, Calcium Carbonate
- General Industrial - Steel Processing, Asphalt / Cement Manufacturing, Fertilizer Production, Pulp Manufacturing, Paper Production, Food and Grain Processing



Large Urethane Lined Valve being measured with CMM arm.



# Engineering Capabilities

## The difference between ordinary and extraordinary is that little “extra”!

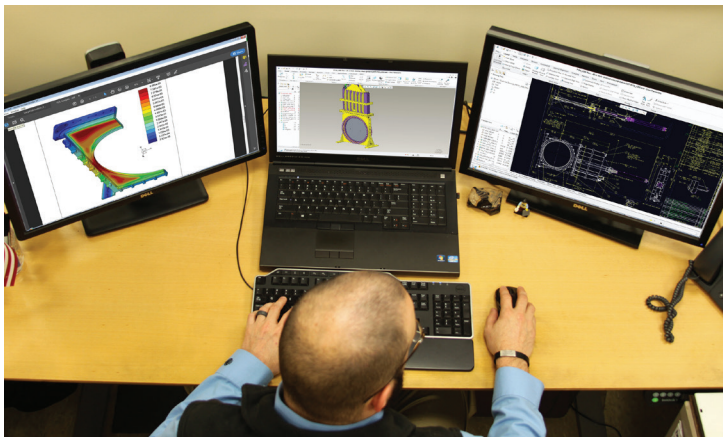
When designing large diameter valves, extraordinary consideration has to be made for forces, spans, deflections, loading seating surfaces, shipping constraints, site constraints and media characteristics.

The Fabri-Valve™ brand has been synonymous with large valves for decades. We’ve learned over the years that each valve must be specifically designed and built to perform to the customer’s specific service conditions.

From design to fabrication we focus on providing you with an extraordinary value in a valve that has the right design. Because we’re not limited by valve type, size or materials, we can provide a wide range of design flexibility in our products.



ITT machinist operating large CNC machining center.



Large bonnetted valve being designed with the utilization of FEA and 3D modeling.

We can design to fit your space envelope, using whatever valve type best fits your performance requirement – knife gate, wedge gate, slide gate, butterfly or check valve. Seating materials can be metal, elastomer, or plastic. Valves that can operate at high pressures and withstand temperatures up to 2000° F. We provide you the most cost-effective operator mode for the application, whether it’s manual hydraulic, electric or pneumatic.

**We test every one of our valves per our own stringent quality standards and any special requirements for testing certification.**

We employ decades of experience in valve design as well as the most current tools for design and validation including FEA and CFD. We test every valve we make to be sure it meets our quality standards and your performance criteria. Too much is riding on your investment to risk leaving anything to chance. Cycle testing, shell testing and seat testing are standard. We will design additional testing procedures to meet special system design criteria.

# Installations

## Maryland, USA

Config: F134  
Size: 96"  
Pressure: 20 psi  
Wastewater Treatment



## Maryland, USA

Config: F134  
Size: 78"  
Pressure: 50 psi  
Wastewater Treatment



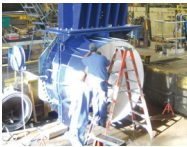
## Michigan, USA

Config: F134  
Size: 84"  
Pressure: 30 psi  
Power (Cogen Gas)



## Michigan, USA

Config: F134  
Size: 84"  
Pressure: 40 psi  
Wastewater Treatment



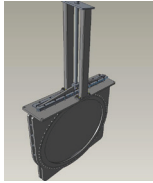
## Utah, USA

Config: F134  
Size: 72"  
Pressure: 175 psi  
Mining



## Illinois, USA

Config: F37  
Size: 84"  
Pressure: 50 psi  
Food & Beverage



## Alabama, USA

Config: F37  
Size: 24" H x 83" W  
Pressure: 65 psi  
Petrochemical



## Peru

Config: F33  
Size: 54"  
Pressure: 150 psi  
Mining



## Brazil

Config: F133  
Size: 30" | 42"  
Pressure: 360 psi | 50 psi  
Mining | Chemical



## Argentina

Config: F37  
Size: 36"  
Pressure: 150 psi  
Mining



## Egypt

Config: F37 Square  
Size: 34.5"  
Pressure: 50 psi  
Food & Beverage



**Kazakhstan**

Config: F71  
Size: 32"  
Pressure: 150 psi  
Petro-chemical



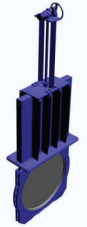
**Mongolia**

Config: F133  
Size: 56" & 48"  
Pressure: 150 psi  
Mining



**China**

Config: F134  
Size: 96"  
Pressure: 75 psi  
Wastewater Treatment  
(Deep Tunnel)



**China**

Config: F44  
Size: 30"  
Pressure: 50 psi  
Petrochemical



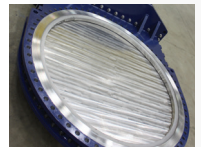
**Hong Kong**

Config: S16  
Size: 48"  
Pressure: 75 psi  
Power (FGD Process)



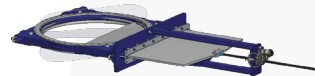
**China**

Config: F134  
Size: 96"  
Pressure: 75 psi  
Wastewater Treatment



**Philippines**

Config: F37  
Size: 87"/2200mm  
Pressure: 5 psi  
Power



**Laos**

Config: F134  
Size: 132"  
Pressure: 50 psi  
Hydro-Electric



**Australia**

Config: C37  
Size: 30"  
Pressure: 150 psi  
Food & Beverage



**India**

Config: F71  
Size: 36"  
Pressure: 740 psi  
Petrochemical



**Zimbabwe,  
Africa**

Config: F71  
Size: 2100mm  
Pressure: 25 psi  
Mining



**Madagascar**

Config: F133 Slide Gate  
Size: 28"  
Pressure: 280 psi  
Food & Beverage



# Markets

## Waste Water

The future of waste water treatment across the globe is evolving at a rapid pace. As populations soar in metropolitan areas, millions of gallons of wastewater and storm water are in need of processing. Municipalities are addressing this need by increasing the capacity of their treatment facilities. As capacities are increased, pipe diameters also increase. Diameters have increased to sizes never thought imaginable a couple of decades ago.

As an alternative to increasing capacity of treatment facilities, deep water tunnels are being utilized more frequently as storage for wastewater until it can be processed at times when excess capacity is available. Deep tunnels are designed with 100 year service lives and are expected to have extremely low maintenance costs. In order to cover 100 years of service, the diameters of the tunnels are greater than 10 feet (3 meters) in diameter.

**Valves designed to satisfy the growth of our population, the health of our environment and safety of our people.**

ITT Engineered Valves recognizes that either approach to handling the increase in wastewater and storm water require large diameter valves. Due to space constraints both above and below the surface, simply scaling a small diameter knife gate valve is not a viable option. In addition to the size of the valves, many other design parameters must be considered to satisfy the growth of our population, the health of our environment and safety of our people. ITT Engineered Valves' large diameter valves are designed to serve them all. Partnering with a global valve manufacturer with decades of experience in the large diameter valve industry only makes sense.



## Mining

Slurry pipelines have become the standard for world class mining companies. Copper, iron, coal, phosphate and many other ores transport well as a slurry. Slurry pipelines are the most economical approach to long distance transport. Slurry lines also have a much softer impact to the environment when compared to rail, conveyor or truck. Similar to other industries, bigger is better! After the initial investment, larger diameter lines will allow for greater throughput and increased capacities as mines grow.

**Larger diameter lines will allow for greater throughput and increased capacities as mines grow.**

Ore slurries are not easy applications. Slurries require robust valves due to abrasion and corrosion properties of the ore. In addition to what is happening inside the pipeline, valves also see less than favorable conditions on the outside. With extreme environmental conditions prevalent in mining regions and the need for subsurface pipelines, the exterior design of the valve is just as important.

With large diameter valves operating on six continents, ITT Engineered Valves understand the strenuous needs of the mining industry. Our engineers do not fit the application to the valve, but design the valve to the application. Every slurry, process and geographic region is unique! Let ITT provide a valve designed specifically for your mining application.



## Hydro Dam

Hydroelectricity generates 16.6% of the world's power. Hydroelectricity is expected to grow at a rate of 3% per year over the next 25 years. It is the largest producer of renewable power and utilized by over 150 countries. Output can be easily regulated for peak energy demands. The potential for hydropower production is greater than five times the actual production. Pair the environmental footprint and untapped reserves with low cost of generation, hydroelectricity will be expanding for years to come.

ITT Engineered Valves has invested in developing large diameter knife gate valves tailored for hydroelectric dams. We feel that hydroelectricity is the responsible approach to satisfying the increase in demand of global power. ITT not only produces a product that controls the flow of water, but also protects other natural resources crucial to the livelihood of the local communities. ITT is not just a valve manufacturer, but a partner to companies constructing the dams and communities who will thrive with them.

**ITT is not just a valve manufacturer,  
but a partner.**

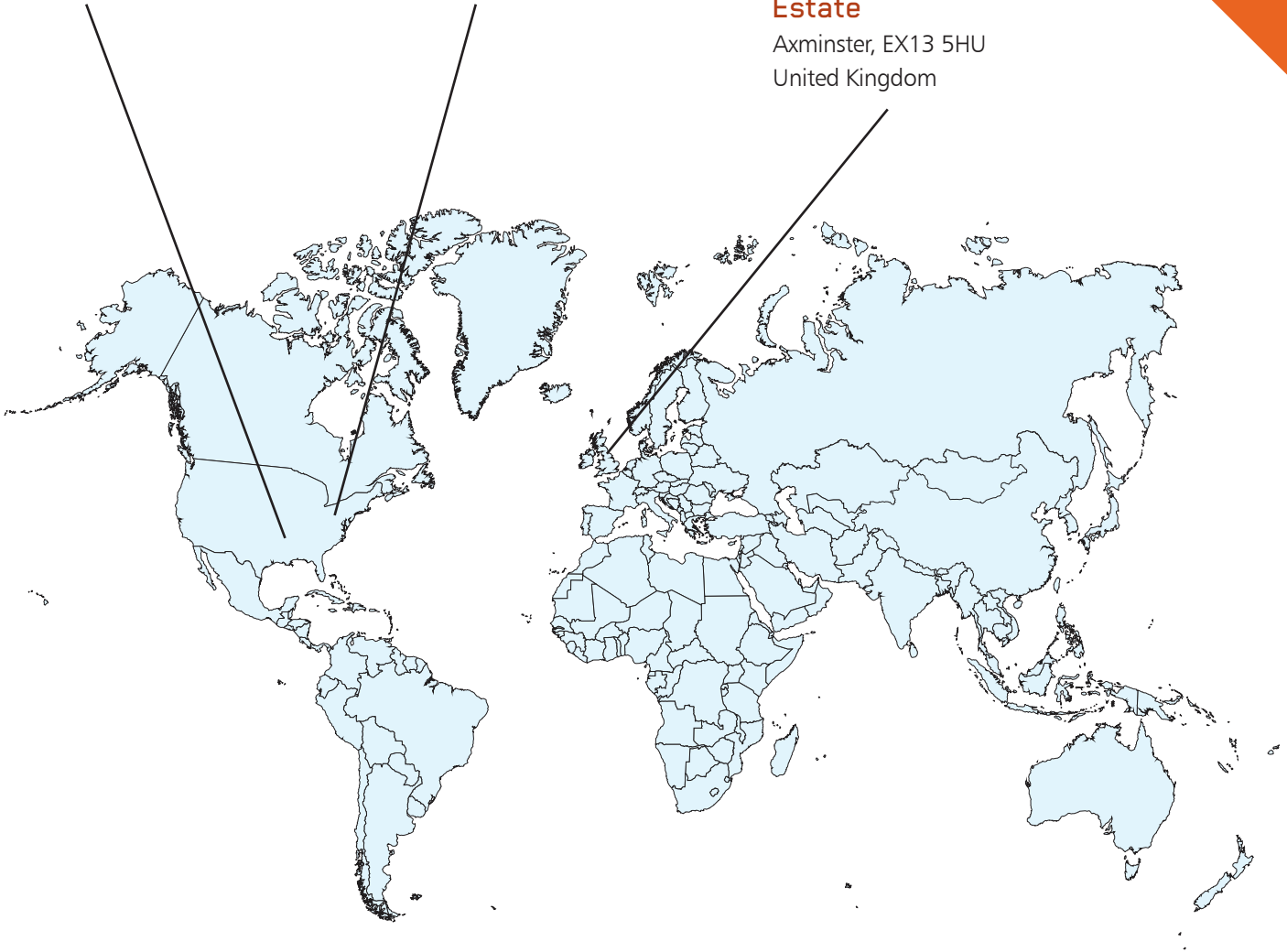


## Factory Locations

**Engineered Valves, LLC**  
1110 Bankhead Avenue  
Amory, MS 38821

**Engineered Valves, LLC**  
33 Centerville Road  
Lancaster, PA 176031

**ITT Industries Ltd.**  
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Cam-Line, Cam-Tite, Dia-Flo,  
EnviZion, Pure-Flo, Skotch

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EnviZion, Pure-Flo

