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DeZURIK
APCO | HILTON

HILTON FABRICATED & CUSTOM VALVES

The HILTON Story

60 Years of Knife Gate Valve Innovation

The HILTON Valve story began in 1944 while Harold HILTON was serving as Engineering Officer on a U.S. Navy destroyer. When a shipboard valve was damaged at sea, Mr. HILTON designed and fabricated a replacement using materials in the ship's maintenance shop.

In the late 1940s, while working as an engineer for a steel fabricating company, Mr. HILTON again designed a fabricated valve when a critical production schedule couldn't wait for the delivery of a cast valve.

In 1952, and with years of fabrication and piping system experience, Mr. HILTON founded HILTON Valve.

Early production included a variety of valve styles with emphasis on fabricated Knife Gates which were used extensively in pulp and paper mills. For the past 60 years, HILTON Knife Gate Valves have found a growing range of applications in other industries based on their ruggedness and economy.

In 1983, HILTON operations were redirected to focus exclusively on the design and manufacture of fabricated valves including Large Diameter and Custom Knife Gate Valves and on other valve designs built to specific application requirements.

With a reputation for design innovation and installed product performance, HILTON Valves provide reliable shutoff and control of high volume and critical flow in all industries including Water, Hydro, Energy, Process, Mining, Material Handling and Marine systems worldwide.

24" Bonneted Knife Gate, 800 psi, Inconel 625 Trim, Coal Processing, Wyoming

Harold HILTON, Founder (right) with Bud Stinson Shop Foreman (right center) and Early Bonneted Knife Gate Valve

Fabricated Large and Custom Valves

Specialization

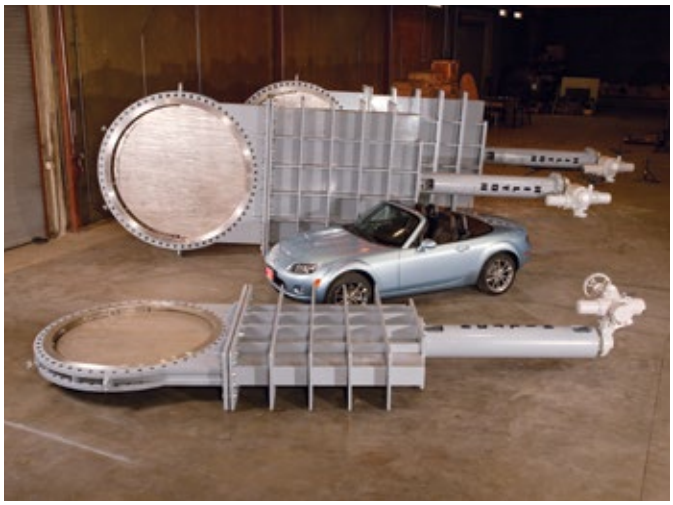
Dedicated HILTON engineering and manufacturing focuses exclusively on fabricated valves. Models include Knife Gate Valves to 144" (3700mm), Custom Knife Gates to ANSI Class 900 and temperatures to 2,000° F (1,090° C), Hydro Valves and a variety of other Fabricated Valve styles.

Fabricated Construction Provides Design Flexibility and Quality

Fabricated construction allows unlimited design flexibility for compliance to U.S. and International Standards. Valves can be built of any weldable alloy with selection based on specifications, media and operating conditions. The use of certified plate material assures design integrity and final valve quality. Plate material is also well suited to the application of special purpose coatings and hard facings which are applied in the HILTON plant.

Fabricated Construction Reduces Manufacturing Time

Plate material is readily available in all alloys to avoid foundry and casting delays to improve responsiveness and reduce delivery time. On severe service applications where valve wear surfaces require periodic refurbishing, fabricated plate construction is more easily repaired than cast valves resulting in quicker turnaround and reduced maintenance cost.



84" & 66" Bonneted Knife Gates, CS Flanges, 304 SS Trim, Electric Motor Actuators, Wastewater Plant, Dallas

30", 36" & 42" Solid SS Bonneted Knife Gates, 50 psi, Wastewater Treatment Plant Gwinnett County, GA

HILTON Leadership Design and Application Engineering Experience

HILTON products reflect 60 years of Fabricated Valve design and are recognized for installed performance with proprietary designs, industry leading technology and unmatched experience. HILTON custom engineering capability builds valve performance with two unique design concepts.

– **Design For Application** matches valve design, rating and material to specific application requirements for assured performance at the lowest cost.

– **Partnership Design Programs** bring together HILTON and customer situation analysis for joint development of application-based and problem solving design specifications to address unique valve requirements. The process begins with a definition of application needs and valve performance criteria and carries through design, build and testing to a coordinated valve specification.

Knife Gate Valves

HILTON valves as shown represent a cross-section of general product design and operating characteristics. Fabricated construction extends this range to meet specific application requirements. Other product options and recommendations are available on request.

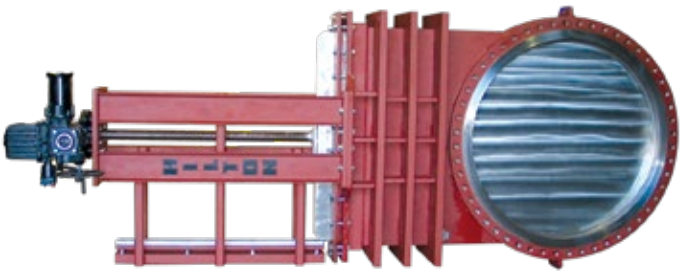
Large Diameter Knife Gate Valves

– Standardized General Service Valves 36" to 144" (900 to 3700mm)

– Round, Square & Rectangular Models

– Built to U.S. or International Standard

– Pressures 25 to 300 psi (170 to 2,070 kpa), Temperatures -40° to 2,000° F (-40 to 1,090° C)



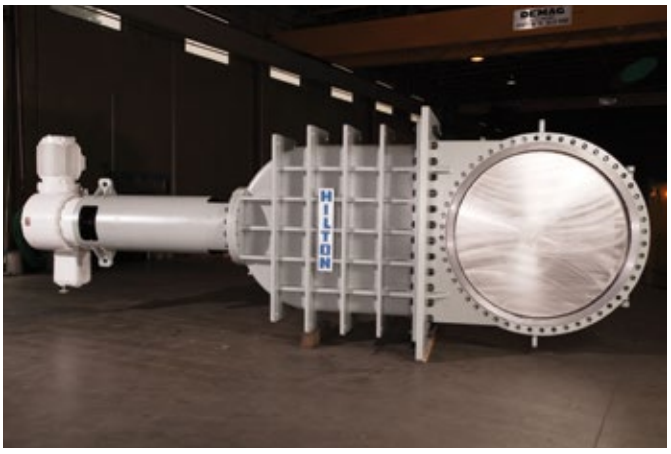
60" Bonnetless Knife Gate, Resilient Seat, Extended F to F, Gate Guide, GE Plastics Southern Indiana

Bonneted Knife Gate Valves

– Knife Gates with Steel, Stainless or Alloy Bonnets

– Pressurized, Unpressurized, Optional Flushing Ports

– Specifications same as basic Knife Gate Valve



60" Bonneted Knife Gate, 275 psi, Carbon Steel, 304 SS Trim, Epoxy Interior, Chicago Deep Tunnel System

Throttling Knife Gate Valves

– Heavy Duty Bonneted Knife Gate Valves

– For Throttling at Full Rated Pressure

– Sizes 6" to 144" (150 to 3700mm), Pressures to 400 psi (2,760 kpa)

– Square Bottom Gate, Round or V-Port

90" Inlet x 102" Outlet Throttling Knife Gate, 30 psi, PG &E Pitt River Dam, Northern California

High Pressure, High Temp Knife Gate Valves

– Severe Service Designs and Materials, Sizes to 72" (1800mm)

– Pressures to ANSI 900, Temperatures to 2,000° F (1,090° C)

8" Bonneted Knife Gate, ANSI 600, 304 SS, Extended RTJ Flanges, Hydraulic Cylinder, Peak Power Plant System

Thru-Port Knife Gate Valves

– Ported Gate with Round or Diamond Opening

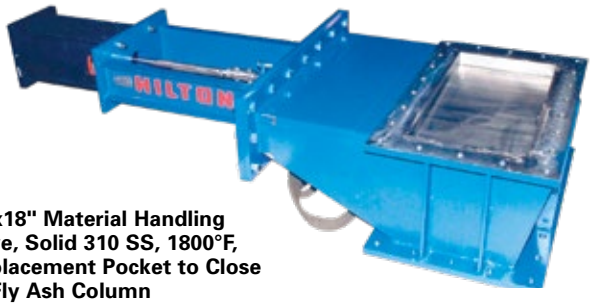
– For Slurries, Solids & Granular Applications

– Sizes 4" to 48" (100 to 1200mm), Pressures to 400 psi (2,760 kpa)

24" Thru-Port Knife Gate, 150 psi, Replaceable Bi-directional Metal Seats, Teflon Internal Cavity Filler, Tianjin Chemical China & GE Plastics Mississippi

Material Handling Valves

– Body Displacement Pocket Allows the Valve to Close Through a Stationary Column of Granular Material



12"x18" Material Handling Valve, Solid 310 SS, 1800°F, Displacement Pocket to Close on Fly Ash Column

Abrasion, Corrosion Resistant Knife Gate Valves

– Special Abrasion & Corrosion Resistant Designs

– Hard Facing: Stellite, Tungsten Carbide, Pulse Fusion

– Sizes 2" to 48" (50 to 1200mm), Temperatures to 2,000° F (1,090° C)

40" Thru-Port Knife Gates, ANSI 300, Removable Port Liners, Tungsten Carbide Hardfacing & Abrasion Resistant 410 SS Gate, Abrasive Mine Tailings, Kennecott Copper, Utah

Custom Knife Gate Valve Designs

– Custom Styles, Configurations, Materials

– Discrete Models Designed to Application Needs

– Vacuum to ANSI Class 900, -40° to 2,000° F (-40 to 1,090° C)

18" Bonnetless Knife Gates, 150 psi, 316 SS Trim, Expanded Metal Safety Guard, Hazardous Waste Disposal, Ohio

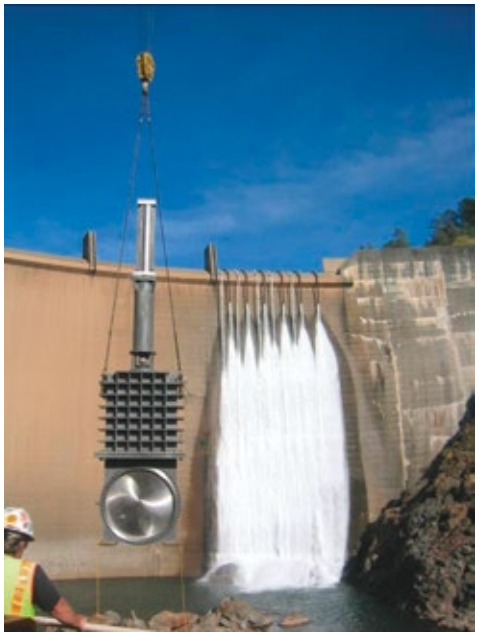
Hydro Guard, Jet Flow & Control Valves

Throttling Knife Gate Valves

For lower head applications, this specially modified Knife Gate Valve is an economical alternative to a Jet Flow Gate. Normally bonneted, can also be supplied bonnetless. Like the Jet Flow Gate, anti-cavitation design includes a downstream port larger than the inlet port to provide sufficient air flow. The bottom of the gate is square to allow full gate support throughout the entire travel length. Conversely, round bottom gates are susceptible to vibration and damage when used in free-discharge service. Throttling Knife Gate Valves provide higher flow capacity than Jet Flow Gates of the same size. Typical construction includes stainless steel wetted parts. Sizes 6" to 144" (150 to 3700mm), pressures to 200 psi (1,380 kpa).

Guard Valves

Guard Valves are specially designed Knife Gate Valves used to provide shutoff and to isolate Hydro flow control valves for maintenance (Jet Flow Gates, Throttling Knife Gate Valves, Howell-Bunger fixed Cone Valves). Capable of closing under full free-discharge flow if the control valve can't be closed. Normally bonneted, can also be supplied bonnetless. Typical construction includes stainless steel wetted parts. Sizes 6" to 144" (150 to 3700mm), pressures to 400 psi (2,760 kpa).



78" Hydro Guard Valve, 130 psi, CS with 304 SS Trim, For Fixed Cone Valve Isolation, Englebright Dam, California

Jet Flow Gate, 24" Inlet, 38" Outlet, 150 psi, CS with 304 SS Trim, Big Tujunga Dam, Los Angeles County

Jet Flow Gates

Specially designed for high velocity flow regulation on high-head dams and reservoirs. Jet Flow Gates provide precise, full range throttling from full open down to full closed. Split body design available with stainless steel trim and epoxy internal coating or with all stainless wetted parts, both with bronze gate guides and bronze seat ring. All components are fully machined for precise alignment. Anti-cavitation features include a tapered seat ring to direct flow inward and a downstream port larger than the orifice port to provide sufficient air flow. Based on original U.S. Bureau of Reclamation design. Sizes 6" to 96" (150 to 2500mm), pressures to 400 psi (2,760 kpa).

42" Jet Flow Gate, Head 800 Feet, La Grand Dam, Tacoma, WA

Other Valve Models, Design Options, Actuators

Fabricated Wedge Gate Valves

– Tight Shutoff, Solid Wedge Gate

– Large, Specialty & Custom Designs

– Sizes to 72" (1800mm), Pressures to 600 psi (4140 kpa)

48" Wedge Gate Carbon Steel Body, Monel Trim, Belzona Interior Coating, Narrow F to F, Shipboard Seawater Cooling

Fabricated Check Valves

– Large Diameter Cushioned Checks with Closure Assist

– Meets Municipal Water System Requirements

– Sizes to 84" (2200mm), Pressures to 150 psi (1,030 kpa)

54" Swing Check Valve, Outside Lever & Weight, Bottom Hydraulic Dampener. Wastewater Treatment Plant, Taiwan

Valve Operating & Control Systems

– Manual, Powered & Custom Actuators, Control Panels

– Pneumatic, Hydraulic, Electric, Electronics

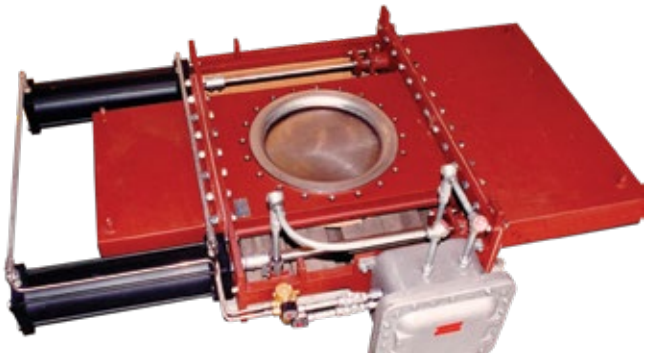
Design Options & Modifications

– Typical Options: Round, Square or Rectangular Models

– Extended Body/Flanges, Different Inlet & Outlet Sizes

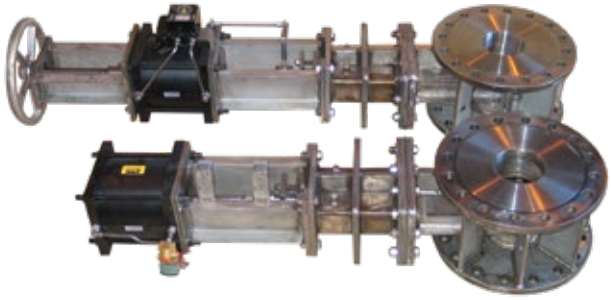
– Two Valves in One Body, Y or T-Style Diverter Valves

– Non Rising Stem Actuators, Side Mounted Actuators



20" Thru-Port Valve, Double Bonneted, Dual-Side Mounted Cylinders to Reduce Length, Dry Solids Gravity Flow

Bonnetless Knife Gate, 150 psi, 304L SS, Extended F-to-F, Purge Ports, Pneumatic, Co-Gen Plant Wood Chip Processing



12" Bonneted Knife Gates, 6" Port, 300 ANSI, 1500°F, 316 SS, Stellite Hardfacing, Hot Wall Valves on Refractory Lined Pipe

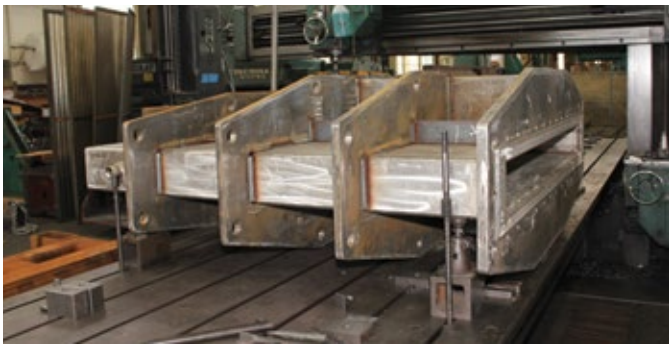
DeZURIK + HILTON Capability

HILTON Operations

HILTON full range manufacturing capability includes in-house Fabrication, Welding, Hard Facing, Machining, Assembly, Testing and Quality Control. Welding is by Certified Welders. Material and Test Certificates are available on all HILTON Valves.

HILTON Engineering brings together the full range and scope of HILTON Knife Gate and Fabrication experience with state-of-the art design capability including Solid Works and Auto Cad Design and Finite Element Analysis to assure valve design and performance that meets exacting specifications and performance criteria. Products are designed and manufactured to U.S. or International Design, Dimensional and Piping Standards and to specific customer specifications as required.

In-House Certified Welding of All Alloys & Hardfacing



In-House Machining, 72" Bonneted Knife Gate Valve

HILTON Service and Repairs

HILTON customer commitment begins with quality manufacture and continues with after-sale support that assures installed valve performance, extended valve life and long term valve economy. Services include start-up and commissioning of new valve systems, field service and maintenance support for installed valves and factory refurbishing and repair of valve wear components. Factory repair provides an engineering analysis of components and materials to define repair tactics needed to return valves to new condition and to maximize valve life at the lowest possible cost. Responsiveness and quick turnaround add the final element of HILTON Valve performance with a 60 year commitment to customer satisfaction.

Combined Experience & Resources

The linking of HILTON and DeZURIK resources creates a broad line of Standard, Fabricated and Custom Knife Gate Valves that reflects a combined 100+ years of Knife Gate leadership in valve design, manufacturing and installed product performance.

The combining of industry experience and product technical support extends application capability in meeting engineered valve requirements in all industries and brings with it a mutual dedication to quality and service.

Four manufacturing locations produce DeZURIK, HILTON and APCO products with a focus on market responsiveness and on providing the highest level of product quality and performance.

A worldwide sales and service organization provides firsthand knowledge of valve design and application to support the development of engineering-based solutions with the full line of DeZURIK, HILTON and APCO products.

Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:
Web Site: www.dezurik.com E-Mail: info@dezurik.com

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