



資源 Resources

- 煉油 Oil Refinery
- 銅礦 Copper Mining
- 鎳礦 Nickel Mining
- 其他礦產 Other Mining

近百年的制造經驗 先進 / 嚴謹的設計理念 日本特有的匠心精神

Nearly 100 years of manufacturing experience
Advanced/Rigorous design concept
Japanese unique spirit of originality

其它領域 Other Special Services

- 乙烯 Ethylene
- PTA / 醋酸 PTA / Acetic Acid
- 石油化工 Petrochemical Industry
- VCM VCM
- 聚碳酸酯 Polycarbonate
- 尿素 Urea
- 丁二醇 Butanediol
- 其它石油化工 Other Petrochemical

能源和環境 Energy and Enviroment

- 煤化工 Coal Chemical
- 多晶硅 Polysilcon
- 氧氣 Oxygen
- 氫氣 Hydrogen
- LNG LNG
- 電廠 Power Plant



公司簡介

Inter-Valve Technology(以下簡稱 IVT)成立於1928年,公司專業製造各類適用於嚴酷工況的特殊閥門及各種普通閥門。公司主要產品有球閥、罐底閥、截止閥、止回閥、蝶閥、閘閥等閥門產品,閥門產品主要應用於石化、PTA、煤化工、煉油及多晶硅、能源等多個行業。

IVT 公司在高溫、高壓、耐磨以及抗腐蝕閥門的科技和工程應用方面具有獨到的特點和優勢,使其長期以來成為高端化工設備的指定供應商,其特殊材料的閥門的製造技術被同行業視為典範。公司產品因其絕對的零洩漏,及在高溫、高壓、高腐蝕、高雜質等極其惡劣工況下的可靠性及長壽命而聞名於世界。IVT 公司具有近 100 年閥門的製造、設計和工程應用的豐富經驗,在與眾多的工程公司及夥伴的合作中,均得到了充分的肯定。其產品在全世界都有廣泛的應用。

General Information

Inter-Valve Technology Corporation (Called IVT for short here) was first established in 1928 and specializes in the design and production of superior quality valves made from exotic materials. IVT provides solutions for critical applications which involve high pressure, high temperature, highly corrosive or erosive environments and is recognized as providing superior products for the oil & gas, petrochemical and energy sectors worldwide. IVT is one of the very few companies able to offer zero leakage (Class VI) solutions for metal seated ball valves due to the superior coating technology employed.

Specialties:

Zero Leakage, Extreme Service Conditions, High Alloy and Exotic Materials, Custom Designs Adapted to Specific Condition.



加工
Machining



裝配
Assembly



設計
Design



檢測
Inspection



檢查
Inspection

製造範圍

Production Range

特殊材質、特殊流體、特殊構造、
嚴酷工況下提供高性能的閥門產品。

High performance valve products with special materials, special fluid, special structure and harsh conditions.



產品應用範圍

Application

根據客戶需求提供適合嚴酷工況，品質優良的閥門產品！

Provide high quality valve products suitable for severe conditions according to the customer demand.

● 精對苯二甲酸 PTA

PTA（精對苯二甲酸）為聚酯纖維、聚脂纖維、PET纖維（原料的塑料瓶）、PET薄膜等的主要原料。通常情況下，PTA由對二甲苯、醋酸的催化劑，如鈷、錳混合，在250℃左右氧化生成的。

PTA (purified terephthalic acid) is the main raw material of polyester fiber, polyester fiber, PET fiber (raw material plastic bottle), PET film and so on. Typically, PTA by xylene, acetic acid catalyst, such as cobalt, manganese mixed, generated at about 250 DEG C oxidation.



IVT解決方案

IVT Proposal

乙酸和對苯二甲酸是具有高度腐蝕性的，要求閥門具有很高的抗腐蝕性能。IVT公司特別設計的鈦材閥門以及應用的經驗保證了閥門的穩定性能。在工廠進行檢修期間，IVT可根據實際應用狀況提供更好的改進方案。

Acetic acid and terephthalic acid are highly corrosive and require high corrosion resistance. IVT company specially designed titanium valve and application experience to ensure the stability of the valve. During the maintenance of the plant, IVT can further improve valve performance.

IVT產品應用

IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
側裝球閥 Side Entry Ball Valve	150#-2500#	1/2"-28"	PTFE / R-PTFE / 石墨 / 金屬 PTFE / R-PTFE / Carbon / Metal	B367 C2 / C3 B381 F2 / F3 / F5 A182 F304 / A351 CF8 A182 F304L / A351 CF3 A182 F316 / A351 CF8M A182 F316L / A351 CF3M HASTALLOY C276 A182 F51 / F53 / F60 A995 4A ETC.
頂裝球閥 Top Entry Ball Valve	150#-2500#	2"-20"	PTFE / R-PTFE / 石墨 / 金屬 PTFE / R-PTFE / Carbon / Metal	
截止閥 Globe Valve	150#-1500#	1/2"-24"	金屬 Metal	
開閥 Gate Valve	150#-1500#	1/2"-24"		
止回閥 Check Valve	150#-1500#	1/2"-72"		
蝶閥 Butterfly Valve	150#-600#	2"-48"	PTFE / R-PTFE / 石墨 / 金屬 PTFE / R-PTFE / Carbon / Metal	
罐底閥 Tank Valve	150#-1500#	1/2"-24"	金屬 Metal	
旋塞閥 Plug Valve	150#-600#	1/2"-16"	PTFE / R-PTFE / PFA / 金屬 PTFE / R-PTFE / PFA / Metal	

● 煤化工 Coal Chemical

煤氣化工藝是從原料煤中提取合成氣(Syngas)技術的一項新型及特殊工藝。合成氣原料為甲醇、氫氣、聚丙烯、尿素、醋酸。在高溫下將煤粉在氧氣中燃燒產生合成氣。整合煤氣化聯合迴圈(IGCC)發電系統是一項在煤氣化工藝中的新技術。近幾年隨著工藝的提高，合成氣燃燒效率和發電效率大幅提高，IGCC工藝備受關注。與此同時，新技術的發展，例如碳搜集與封存(CCS)技術在減小全球溫室氣體排放量方面發揮重要作用，CCS與IGCC技術聯合，該發電系統在全球範圍已迅速增加。



Coal gasification technology is a new and special process for extracting synthetic gas (Syngas) from raw coal. The raw materials of synthetic gas are methanol, hydrogen, polypropylene, urea and acetic acid. Combustion of pulverized coal in oxygen to produce syngas at high temperatures. Integrated gasification combined cycle (IGCC) power generation system is a new technology in coal gasification process. In recent years, with the improvement of the process, the combustion efficiency and power generation efficiency of the synthetic gas have been greatly improved, and the IGCC technology has attracted more and more attention. At the same time, the development of new technologies, such as carbon capture and storage (CCS) technology play an important role in reducing global greenhouse gas emissions, CCS and IGCC technology, the power system has been increasing rapidly in the world.

IVT解決方案 IVT Proposal

不論是否為煤粉形式，筒倉末端的切換閥必須在高壓作用下將煤粉倒入氣化爐(通過鎖鬥系統)。由於金屬密封球閥採用刮刀設計並其與近乎完美的高圓整度閥球配合，從而達到高壓下順暢關斷、嚴格密封的效果。此外，IVT氧氣球閥可在出廠前進行脫油脫脂處理，這些處理工序都是在清潔室中進行的，所有檢測標準嚴格按照IVT廠標執行。由於球閥圓整度的高精度和表面硬化工藝的領先技術可將IVT閥門壽命進一步提高。

In the case of pulverized coal, the valve at the end of the silo must be pulverized coal into the gasifier (through the lock hopper system) under high pressure. As the metal seal ball valve design and the use of the knife with a nearly perfect high roundness ball valve, so as to achieve a smooth shutdown under high pressure, strict sealing effect. In addition, IVT will carry out degreasing treatment on oxygen valve in the factory, the treatment process is carried out in the clean room, all in strict accordance with the relevant standards of IVT testing standards. Due to the high degree of roundness of ball valve and surface hardening technology leading technology can further improve the life of IVT valve.

IVT產品應用 IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
球閥 Ball Valve	150#~1500#	1"~24"	金屬 Metal	A182 F304/A351 CF8 A182 F304L/A351 CF3 A182 F316/A351 CF8M A182 F316L/A351 CF3M INCONEL 600/625 MONEL N04400 ETC.
閘閥 Gate Valve	150#~1500#	1"~18"	金屬 Metal	
截止閥 Globe Valve				
止回閥 Check Valve				

● 石化 Petrochemical

石油化工指以石油和天然氣為原料，生產石油產品和石油化工產品的加工工業。石油產品主要包括各種燃料油(汽油、煤油、柴油等)和潤滑油以及液化石油氣、石油焦炭、石蠟、瀝青等。生產石油化工產品的第一步是對原料油和氣(如丙烷、汽油、柴油等)進行裂解，生成以乙烯、丙烯、丁二烯、苯、甲苯、二甲苯為代表的基本化工原料。第二步是以基本化工原料生產多種有機化工原料(約200種)及合成材料(塑膠、合成纖維、合成橡膠)。



Petrochemical refers to oil and natural gas as raw material, processing industry of petroleum products and petrochemical products. Petroleum products mainly include all kinds of fuel oil (gasoline, kerosene, diesel oil and lubricating oil) and liquefied petroleum gas, petroleum coke, paraffin and asphalt. The first step in the production of petrochemical products is to separate raw oil and gas (such as propane, gasoline, diesel, etc.), to produce ethylene, propylene, butadiene, benzene, toluene, xylene as the representative of the basic chemical raw materials. The second step is to produce a variety of organic chemical raw materials (about 200 kinds) and synthetic materials (plastics, synthetic fibers, synthetic rubber).

IVT解決方案 IVT Proposal

煉油裝置中的加氫閥門，乙烯等裝置中的低溫閥門、高壓閥門，要求壓力高、密封性能好，對閥門的性能提供了更加苛刻的要求。IVT所提供的低溫閥門、金屬密封高壓球閥、高壓閘閥、高壓截止閥、高壓止回閥等，特殊的專利設計以及應用的經驗保證了閥門的穩定性能及更長的使用壽命。

Hydrogenation valve in oil refining unit, cryogenic valve and high pressure valve in ethylene plant, the valve provides a more demanding performance requirements of high pressure, good sealing performance. IVT provided by the cryogenic valve, metal seal ball valve, high pressure gate valve, high pressure globe valve and high pressure check valve, etc., with special patent design and application experience to ensure the stability of the valve and longer service life.

IVT產品應用 IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
球閥 Ball Valve	150#~2500#	1"~24"	金屬 Metal	A350 LF2 A182 F11 / F22 A217 WC6 / WC9 A216 WCB / A105 A182 F304 / A351 CF8 A182 F304L / A351 CF3 A182 F316 / A351 CF8M A182 F316L / A351 CF3M ETC.
閘閥 Gate Valve	150#~2500#	1"~18"	金屬 Metal	
截止閥 Globe Valve				
止回閥 Check Valve				
蝶閥 Butterfly Valve	150#~600#	2"~48"	PTFE / R-PTFE / 石墨 / 金屬 PTFE / R-PTFE / Carbon / Metal	

● 礦產 Mining

鎳基材質是做抗腐蝕、抗侵蝕金屬材料的基體材質，這些抗侵蝕的材料如不銹鋼和鎳鐵基合金。近年來，隨著建築材料和廠房設備的需求，對鎳基材料的需求大量增加。鎳礦生產工藝有兩個主要類型，HPAL(高壓酸洗法)，其方法是從較低品質的鎳礦中提取高品質鎳礦冶煉工藝方法。SMELTING法是從高品質的硫化礦原料中冶煉出鎳銅合金的工藝方法。IVT產品閥門主要針對HPAL工藝方法進行使用設計。管道中流體通常為高壓、粘稠、強酸性介質，針對此流體特性，IVT所設計閥門針對此工藝條件進行特殊規格設計。



Nickel base material is made of corrosion resisting and erosion of metal matrix material, the erosion resistant materials such as stainless steel and chrome nickel base alloy. In recent years, with the demand for building materials and plant equipment, a large increase in the demand for nickel based materials. There are two main types of ore production technology, HPAL (High Pressure Acid Leach), the method is of high quality nickel ore smelting process to extract from low quality nickel ore. SMELTING process is a process for smelting nickel copper alloy from high quality sulfide ore raw material. IVT products mainly for the use of HPAL process design. The fluid in the pipeline is usually high pressure, thick, strong acid medium, for this fluid characteristics, IVT design valve for this process conditions for special specifications.

IVT解決方案 IVT Proposal

针对镍矿工艺特点，介质为高压、粘稠、高速流体，因此会造成阀门需要频繁维修和维护的工作，此维修问题十分突出和棘手。IVT所提供的金属密封球阀，在密封面厚度、阀杆强度、球阀结果等方面进行了针对性的设计以延长阀门使用寿命，并提供便于现场维修的设计方式。

According to the process characteristics of nickel, high pressure, high speed, medium for viscous fluid, so it will cause the valve to need frequent repairs and maintenance work, the maintenance problem is very prominent and difficult. IVT provides the metal sealing ball valve, the sealing surface thickness, stem strength, valve ball results and other aspects of the targeted design to extend the service life of the valve, and to provide on-site maintenance design.

IVT產品應用 IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
球閥 Ball Valve	150#~1500#	1/2" ~ 16"	金屬 Metal	B381 F12 A182 F51 A182 F304 / F304L A182 F316 / F316L ETC.
截止閥 Globe Valve	150#~600#	1/2" ~ 12"		
罐底閥 Tank Valve				

● 多晶矽 Polysilicon

多晶矽是製作半導體和太陽能電池的基本材料。最近幾年，太陽能電池板的應用迅速增加。

Polycrystalline silicon is the basic material for making semiconductors and solar cells. In recent years, the use of solar panels will increase rapidly.



IVT解決方案 IVT Proposal

多晶矽的製造過程需要在高溫高壓、外部零洩漏，這對於高毒性的三氯矽流體是至關重要的。此外，輸送流體具有很高的硬度，大多數情況下，閥門的使用壽命會因此大大降低。IVT提供的閥門具有完美的圓球度及金屬閥座採用特殊的表面硬化處理保證了閥門有更長的使用壽命。

The fabrication process of polysilicon requires high pressure and external zero leakage, which is crucial to the highly toxic three silane fluid. In addition, the fluid has a high degree of hardness, in most cases, the service life of the valve will be greatly reduced. IVT provides the valve with sphericity and metal seat with perfect surface hardening special treatment to ensure that the valve has a longer service life.



IVT產品應用 IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
球閥 Ball Valve	600#~1500#	1/2"~12"	石墨/金屬 Graphite / Metal	A351 CT15C / B408 N08811 A351 CF8 / A182 F304 A351 CF8M / A182 F316 ETC.
截止閥 Globe Valve			金屬 Metal	
閘閥 Gate Valve				
止回閥 Check Valve		1/2"~10"		

● 醋酸 Acetic Acid

醋酸是一種有機化合物，由生物材料發酵而來的。這種方法生產的醋酸占全球總產量的10%。一般的工業使用由甲醇羰基化。40~45% 的醋酸基本組成醋酸乙烯單體用來製造油漆和粘結基材等。醋酸的第二種應用是製作乙酸酐——一種強乙醯化試劑。這是一種醋酸纖維素的基本材料，用來製作合成纖維織物。



Acetic acid is a kind of organic compound, which is fermented by biological material. The acetic acid produced by this method accounts for 10% of global output. Carbonylation of methanol for general industrial use. 40 ~ 45% acetic acid composition of vinyl acetate monomer used in the manufacture of paint and adhesive material. The second application of acetic acid is the production of acetic anhydride, a strong acetylation reagent. This is a basic material of cellulose acetate, used to make synthetic fabrics.

IVT解決方案 IVT Proposal

醋酸在常溫下為無色液體，有刺激性氣味和高腐蝕性。IVT可以提供最合適的鈦材或哈氏合金閥門輸送這些液體。

Acetic acid is a colorless liquid at room temperature, has a pungent odor and high corrosion. IVT can provide the most suitable zirconium or Hastelloy valves to deliver these liquids.

IVT產品應用 IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
球閥 Ball Valve	150#~600#	1/2" ~ 10"	PTEE / R-PTFE / PEEK / 金屬 PTEE / R-PTFE / PEEK / Metal	ZIRCONIUM 702 / 705 HASTALLOY B2 / B3 HASTALLOY C276 ETC.
截止閥 Globe Valve			金屬 Metal	
罐底閥 Tank Valve				
止回閥 Check Valve				
旋塞閥 Plug Valve	150#~600#	1/2" ~ 10"	PTEE / R-PTFE / PFA / 金屬 PTEE / R-PTFE / PFA / Metal	

● 尿素 Urea

尿素是非常重要的材料，它是從無機化合物合成的第一有機化合物，促進了有機化學的發展。尿素大量用於鉀肥等行業，是氮、磷酸和鉀的三元素複合肥。尿素用來控制氮的含量。在過去，硫酸銨是提供肥料的氮。近些年，尿素肥料成為了主流。此外，尿素是重要的塑膠工業的原料。脲醛樹脂是由尿素和甲醛混合而成，它被廣泛應用於木材膠粘劑。尿素生產廠使用了許多高壓截止閥和角閥。



Urea is very important material as it is the first organic compound synthesized from inorganic compound, starting the development of organic chemistry. A lot of Urea is used as Fertilizer and Moisturizing Emulsion. The major three-element of Fertilizer is Nitrogen, Phosphoric Acid and Kalium. Urea is used for nitrogen-release fertilizer. In past years Ammonium Sulfate is used to supply nitrogen in the fertilizer. In recent years neutral Urea Fertilizer become mainstream, due to Ammonium Sulfate mutates soil to acidic property. Also, Urea basis Moisturizing Emulsion has effective buff skin not only keep moisture in. Moreover, Urea is important for raw material of Plastics industry. Urea resin is made from mixed Urea and Formaldehyde, in addition It is widely used for Wood Adhesive. Urea manufacturing plants use many High pressure Block Valve and Angle valve.



IVT解決方案 IVT Proposal

我們與閥門材料廠家在閥門的閥體和閥芯材料上進行合作，使閥門有更穩定的表現，使閥門的使用壽命更長。我們可以根據客戶要求提供閥門產品。

We are using 316 Modified SS solid block which is developed in co-operation with our material vendor for the valve body and the trim. These are stable performing with longer life in the many Urea plants around the globe. We can provide the best offer for a variety of customer requirements, for a wide range fluid condition in other materials.

IVT產品應用 IVT Product Application

閥門 Valve	壓力等級 Pressure Rating	尺寸 Size	閥座形式 Seat Type	閥體材料 Material
角閥 Angle Valve	150#~4500#	1/2" ~ 16"	金屬 Metal	A182 F316L A182 F316L MOD A182 F310 ELC.
截止閥 Globe Valve				
直通式/角式止回閥 Straight / Angle Check Valve	150#~2500#			

產品特點

Characteristics

匠心鍛造、近百年技術底蘊
開拓創新、解決行業需求

The ingenuity of forging, nearly 100 years technical background Develop innovation and solve industry demand.

- 高/低溫、高壓等：在極其惡劣工况下也能保證長壽命使用。 High / low temperature, high pressure, etc.: It can also be used in a very bad condition.
- 強耐腐蝕性：保證閥門在強腐蝕環境下的長壽命使用。 Strong corrosion resistance: To ensure that the valve in a strong corrosive environment for long life.
- 可以加裝不同管道控制執行機構，包括電動、氣動、手動等。 Can be installed different type actuators, such as electric, pneumatic, manual other operating actuators.
- 低壓降—高流量—直線流通。 Low pressure high flow straight flow.
- 內部零洩漏，洩露等級能夠達到ANSI Class VI。 Internal zero leakage, Leakage level can reach ANSI Class VI.
- 各種特種資料保證閥門的在不同工况下的工作。 All kinds of special materials to ensure that the valve in different working conditions.
- 安裝極其方便——在很短的時間內完成安裝。 Installation is very convenient - in a very short period of time to complete the installation.
- 可以應用幾乎所有的合金材料。 Almost all alloy materials can be used.
- 防火、防爆的安全設計。 Fire safety and explosion-proof.
- 標準的ANSI標準法蘭盤連接——可與同樣類型產品互換。 ANSI standard flange connections - interchangeable with the same type of product.

外部洩漏的控制

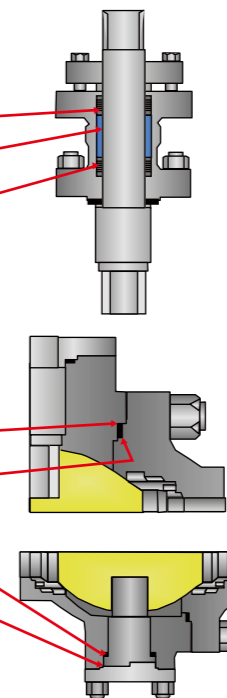
External Leakage Control

a. 填料壓蓋 → 雙層或三層密封結構
Gland of Packing → Double Seal (or Triple Seal)

- 1st密封：石墨填料（低洩漏專用填料）
1st Seal: Grafoil packing (Low Emission Packing)
- 2nd密封：燈籠環結構
2nd Seal: Lantern ring structure
- 3rd密封：石墨填料（低洩漏專用填料）
3rd Seal: Grafoil packing (Low Emission Packing)

b. 閥體 → 雙密封
Body Flange → Double Seal

- 1st密封：墊片或者金屬O型環
1st Seal: Spiral wound gasket or Metal O-ring
- 2nd密封：金屬密封+液體墊片
2nd Seal: Metal-contact + Liquid gasket

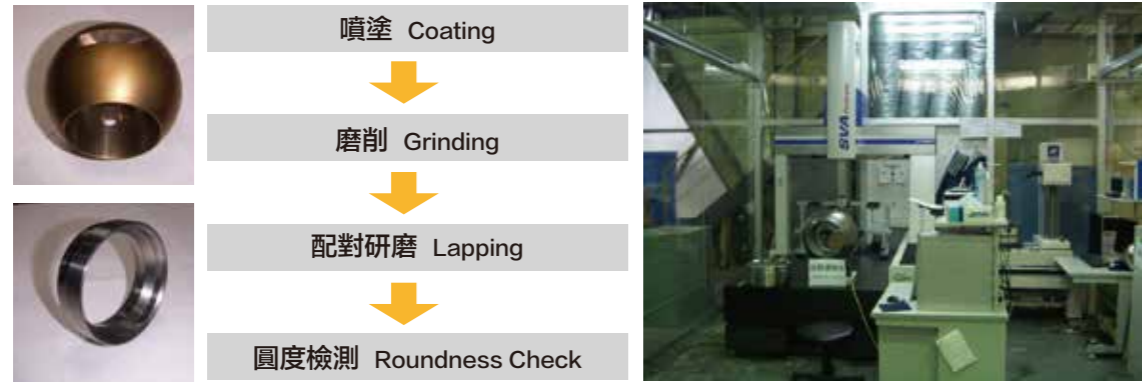


低洩漏專用填料
(取得ISO15848低洩漏認證)
雙層或三層密封結構
動載荷結構

Low Emission Type Packing
(ISO15848 Certification Obtained)
Double or Triple Seal Structure
Live Loading Structure

閥球的研磨及檢測

Ultimate Roundness



閥球的圓度 Allowance of distortion for roundness

≤ 5μm (5 μm or less)

高的圓度能够有效保證閥門的密封性能。

This ultimate roundness enables for real tight shut

閥座無洩漏

No Seat Leakage

■ 金屬密封閥門符合ANSI/FC170-2標準VI級，零泄漏

Metal Sealing Ball Valves are constructed under ANSI/FC170-2 Leakage Class VI ("NO LEAKAGE") with grease & water-free conditions

■ 球面圓度加工精度高達到5μm，密封等級 Class VI

Hard Facing coupled with the roundness within 5μm extends the longevity of the Leakage Class VI

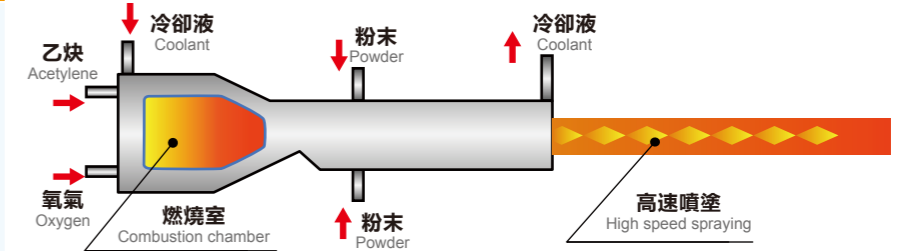


硬化處理 Hard Facing	司特立 Stellite	鎳基金屬 Ni Alloy Over-Lay	鍍鉻 HCr	氧化鈦 TiO ₂	碳化鎢 Tungsten Carbide	氧化鉻 Cr ₂ O ₃
硬度HRC Hardness HRC	40~47	55~60	60~62	65~68	65~70	65~72
厚度 μm Thickness μm	1.5mm	500(Max)	30(Max)	300(Max)	300(Max)	300(Max)
方法 Method	堆焊 Welding	熱噴塗 PFSP	電鍍 E. Plating	等離子噴塗 Plasma	超音速噴塗 Detonation	等離子噴塗 Plasma

超音速噴塗WC/CrC

Detonation spraying WC/CrC

超音速噴塗
Detonation spraying
噴塗速度Mach 3~4
Spraying speed Mach 3~4
高密度
High-density
硬度 (HRC) : 65~70
Hardness (HRC): 65~70
厚度 (μm) : 300 (Max)
Thickness (μm): 300 (Max)
噴塗角度: 45°~90°
Spraying angle: 45°~90°
噴塗距離 (mm) : 200~300
Spraying distance (mm): 200~300
結合強度 (Kgf/mm²) : >7
Bond strength (Kgf/mm²): >7



超音速噴塗是在特殊設計的燃燒室裏，將氧氣和乙炔氣按一定的比例混合後引爆，以突然爆炸的熱能加熱融化噴塗材料，並利用爆炸衝擊波產生的高壓把噴塗粉末材料高速噴射到工件基體表面形成塗層。

Detonation spraying in the combustion chamber is specially designed, oxygen and acetylene gas by mixing a certain proportion after the detonation, the sudden explosion of heat to melt spraying material, high pressure and wave generated by the explosion of the spraying powder high-speed spray into the substrate surface coating.

超音速噴塗的最大特點是粒子飛行速度高，動能大。優點如下：

1. 噴塗層硬度高，可以達到HRC65-70。
2. 塗層和基體的結合强度高，可以達到70-75MPa。
3. 塗層緻密，孔隙率很低，可以達到≤2%。
4. 塗層表面加工後粗糙度低，減小研磨的加工餘量。
5. 工件表面溫度低，基體不會產生變形。

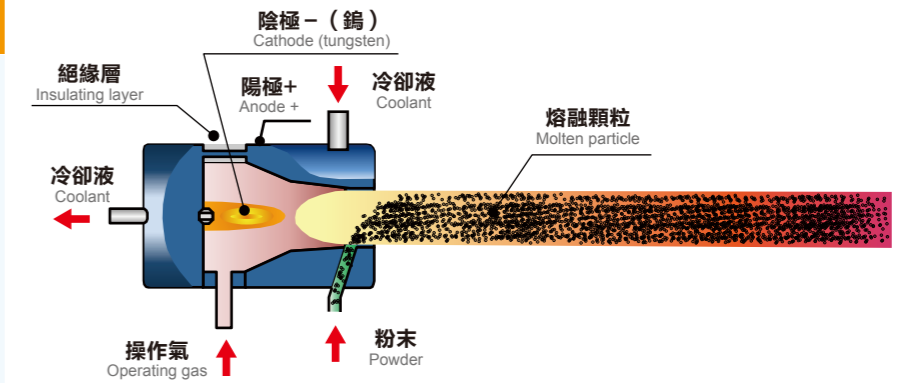
The biggest characteristic of detonation spraying is that the particle has high flying speed and large kinetic energy. Advantages are as follows:

- 1 spraying layer hardness is high, can reach HRC65-70.
- 2 the bonding strength between the coating and the substrate is high, which can reach 70-75MPa.
- 3 The coating is dense and the porosity is very low, can reach less than 2%.
- 4 the surface roughness of the coating is low and the machining allowance is reduced.
- 5 workpiece surface temperature is low, the matrix will not produce deformation.

等離子噴塗Cr₂O₃ / TiO₂

Plasma spraying Cr₂O₃ / TiO₂

等離子噴塗
Plasma spraying
噴塗速度Mach 2
Spraying speed Mach 2
等離子體溫度 > 10,000℃
Plasma temperature > 10000℃
基體溫度 < 150℃
Substrate temperature 150℃
高密度
High-density
硬度 (HRC) : 65~68
Hardness (HRC): 65~68
噴塗角度: 45°~90°
Spraying angle: 45°~90°
厚度 (μm) : 300 (Max)
Thickness (μm): 300 (Max)
結合強度 (Kgf/mm²) : 4.2
Bond strength (Kgf/mm²): 4.2



等離子噴塗科技是採用由直流電驅動的等離子電弧作為熱源，將陶瓷、合金、金屬等材料加熱到熔融或半熔融狀態，並以高速噴向經過預處理的工件表面而形成附著牢固的表面層的方法。以使基體表面具有耐磨、耐蝕、耐高溫氧化、電絕緣、隔熱、防輻射、減磨和密封等效能。

Plasma spraying technology is the use of plasma arc driven by DC power as heat source, heating alloy, ceramics, metal and other materials into molten or semi molten state, and to the jet to the surface of the workpiece after pretreatment and the formation of the surface layer. In order to make the surface of the substrate with wear resistance, corrosion resistance, high temperature oxidation resistance, electrical insulation, heat insulation, radiation protection, grinding and sealing performance.

等離子噴塗的最大特點是粒子溫度非常高。優點如下：

1. 噴塗層硬度高，可以達到HRC65-68。
2. 塗層和基體的結合强度高，可以達到42-45MPa。
3. 塗層緻密，孔隙率很低，可以達到≤2%。
4. 塗層表面加工後粗糙度低，減小研磨的加工餘量。

The biggest characteristic of plasma spraying is that the particle temperature is very high. Advantages are as follows:

- 1 spraying layer hardness is high, can reach HRC65-68.
- 2 the bonding strength between the coating and the substrate is high, which can reach 42-45MPa.
- 3 The coating is dense and the porosity is very low, can reach less than 2%.
- 4 the surface roughness of the coating is low and the machining allowance is reduced.

合理的內部結構:

Reasonable Internal Structure:

防腐蝕，磨蝕
Anti-Corrosion & Slurry Resistance

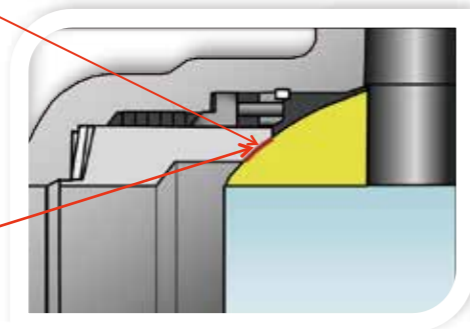
先進的硬化處理科技，使得IVT閥門使用壽命更長
Advanced hardening treatment technology, making the IVT valve longer life

高強度的閥杆，軸承
High strength stem, bearing

高溫金屬閥座
High temperature metal valve seat

刮刀式設計閥座適用於漿液及粘稠性介質
The scraper type design valve seat is suitable for thick and viscous medium

球面接觸
Spherical surface contact



火災安全設計:

Fire Safety Design

PTFE / R-PTFE / PEEK Seat Type

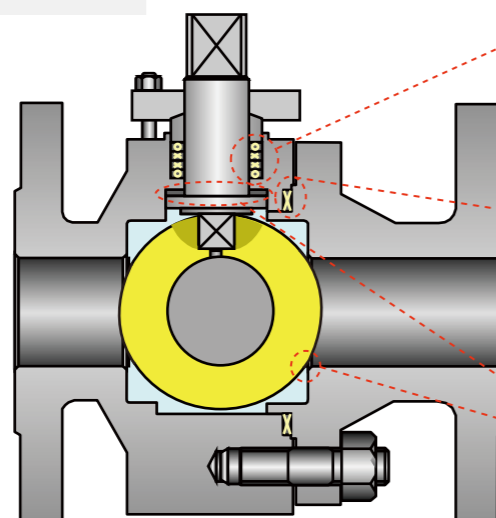
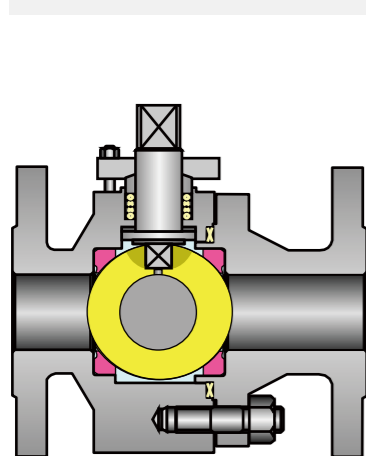
API607消防安全試驗

Fire Safe Test to API607 Edition

試驗介質：水
Test Media : Water

燃燒時間：30min
Burn period : 30min

火焰溫度：750°C至1000°C之間
Flame Temperature : Between 750 °C and 1000 °C



柔性石墨填料
Grafoil Packing

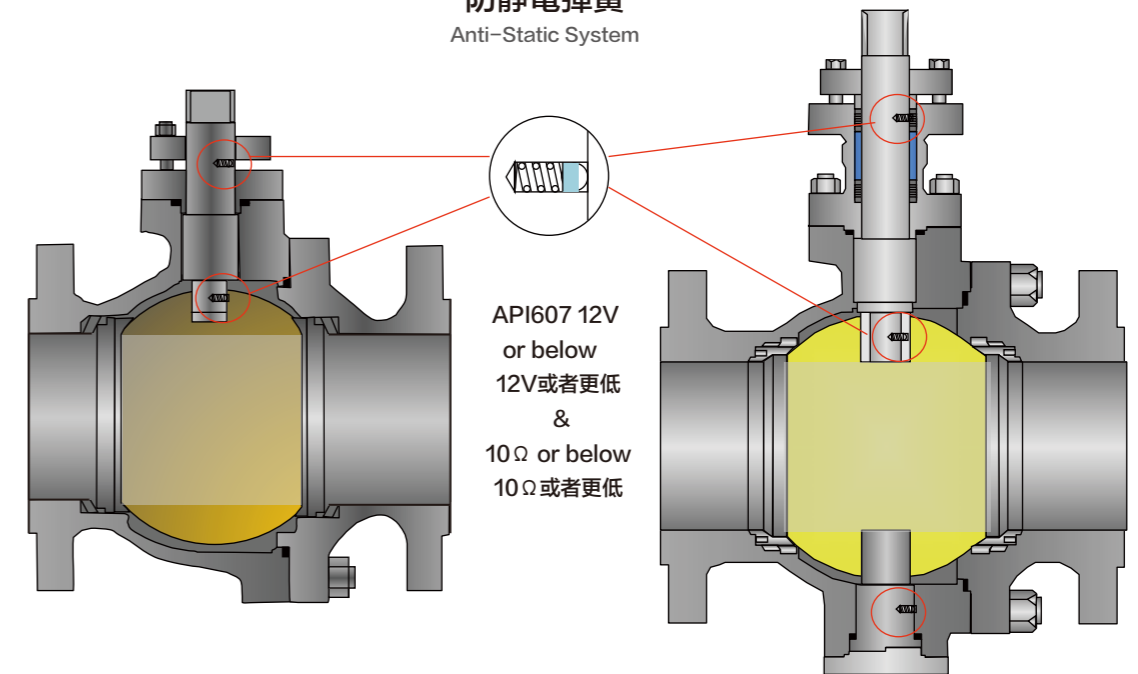
雙密封結構：
墊片（柔性石墨）+金屬接觸
Double Seal Structure :
Gasket (Grafoil) + Metal Touch

金屬接觸
Metal Touch

壓力
Pressure →

防靜電彈簧

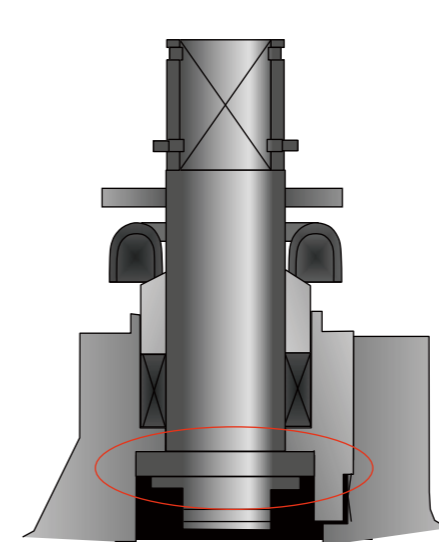
Anti-Static System



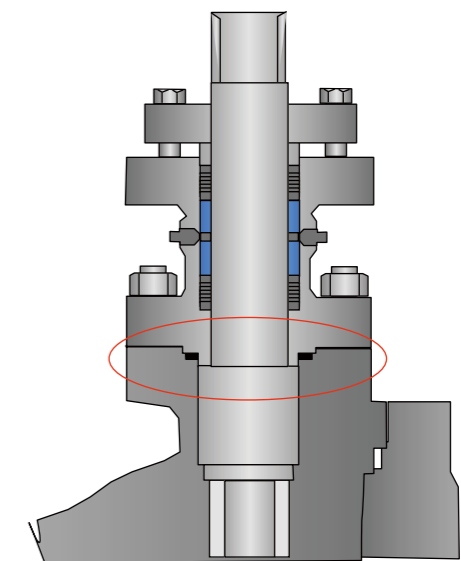
API607 12V
or below
12V或者更低
&
10Ω or below
10Ω或者更低

防吹出閥杆

Blow-Out Proof Stem



標準閥杆
STD Stem



加長閥杆
Extend Stem

產品介紹

Valve Introduction

針對不同的工况提供
專業的閥門產品。

Provide professional valve products according to
different conditions.

球閥產品介紹

Ball Valves



	軟閥座 Soft Seat	金屬閥座 Metal Seat	夾套閥 Jacket	V型球閥 V-Ball
設計標準 Applied Design Code	ASME B16.34 / ASME Section VIII / ASME B 16.5 / API 6D			
尺寸範圍 Size	1/2"~ 28"	1/2"~ 24"		1/2"~ 18"
壓力等級 Pressure Rating	150# ~ 1500#	150# ~ 4500#	150# ~ 1500#	
面到面標準 Face to Face Dimension	ASME B16.10			
溫度範圍 Temp. Range	-40°C ~ 300°C	-40°C ~ 750°C	-40°C ~ 550°C	
密封等級 Allowable Leakage	API 598 or FCI 70-2			
閥體材質 Body Material	鈦材 / 鋳材 / 哈氏合金 / 蒙乃爾 / 英科乃爾 / 雙相鋼 / Incoloy 等 Titanium / Zirconium / Hastelloy / Monel / Inconel / Duplex / Incoloy etc.			
閥座材質 Seat Material	PTFE, 石墨, PEEK PTFE, Carbon, PEEK	金屬閥座 Metal	PTFE, 石墨, PEEK, 金屬 PTFE, Carbon, PEEK, Metal	
硬化處理 Hard Facing	氣體氮化 Gas Nitride	多種 Various	多種 Various	多種 Various
操作方式 Operation	氣動 / 電動 / 手柄 / 齒輪箱 Pneumatic / Electric Motor / Lever / Gear			

球閥產品介紹

Ball Valves

軟密封球閥

Soft Seat Ball Valve



壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2" ~ 28"	Valve Size: 1/2" ~ 28"
應用溫度：-40°C ~ 250°C	Temperature Range: -40°C ~ 250°C
閥杆防吹出結構	Blow-out Proof Stem
火災安全設計	Fire Safety Design
彈性閥座設計	Elastic Seat Structure
低洩漏結構設計 (ISO15848低洩漏認證)	Low Emission Structure Design (ISO15848 Certification)

PTFE/R-PTFE/PEEK閥座浮動球閥

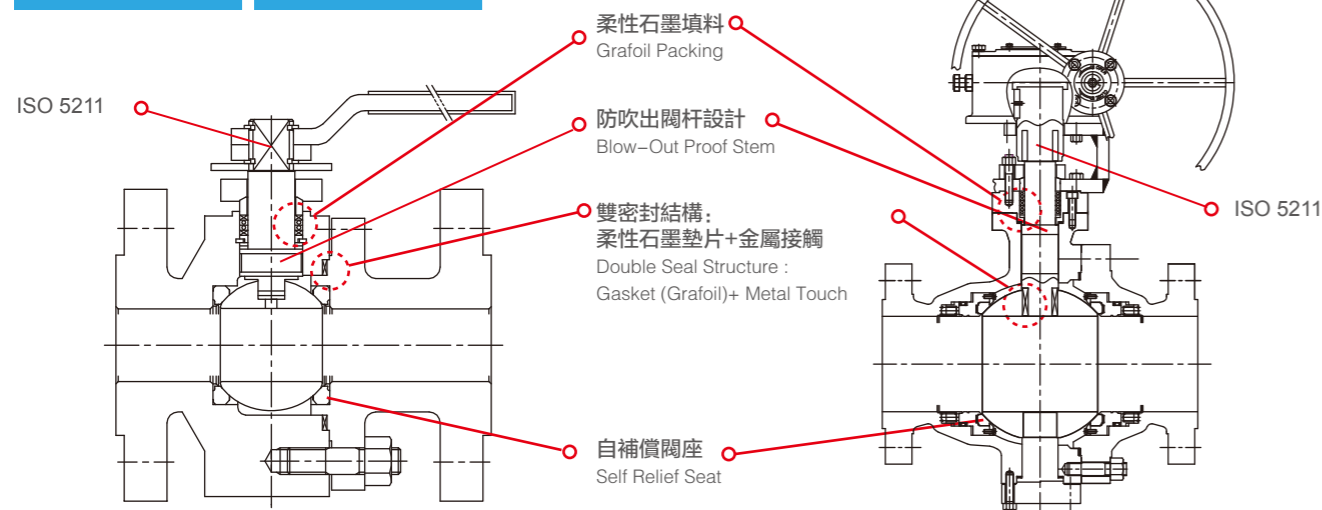
PTFE/R-PTFE/PEEK Seat Floating Type Ball Valve

PTFE/R-PTFE/PEEK閥座固定球閥

PTFE/R-PTFE/PEEK Seat Trunnion Type Ball Valve

防腐蝕
Anti-corrosion

防火安全設計
Fire safety design

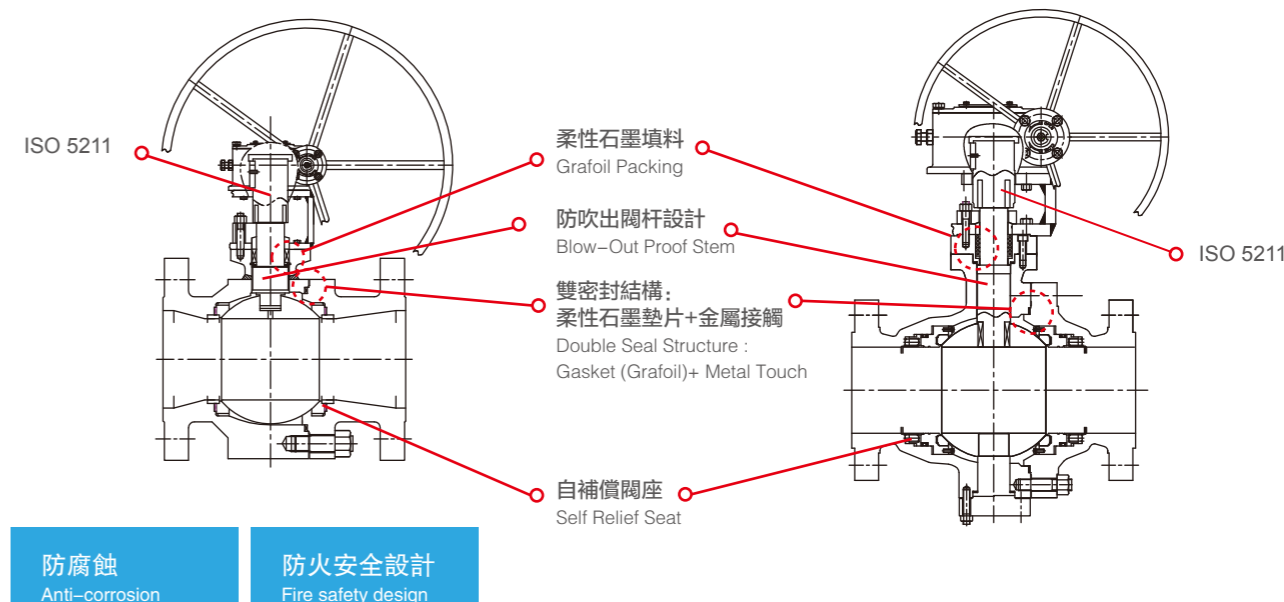


石墨閥座浮動球閥

Carbon Seat Floating Type Ball Valve

石墨閥座固定球閥

Carbon Seat Trunnion Type Ball Valve



球閥產品介紹

Ball Valves

石墨閥座球閥

Carbon Seat Ball Valve



壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2" ~ 28"	Valve Size: 1/2" ~ 28"
應用溫度：-40°C ~ 300°C	Temperature Range: -40°C ~ 300°C
閥杆防吹出結構	Blow-out Proof Stem
火災安全設計	Fire Safety Design
彈性閥座設計	Elastic Seat Design
低洩漏結構設計 (ISO15848低洩漏認證)	Low Emission Structure Design (ISO15848 Certification)

球閥產品介紹

Ball Valves

金屬閥座球閥

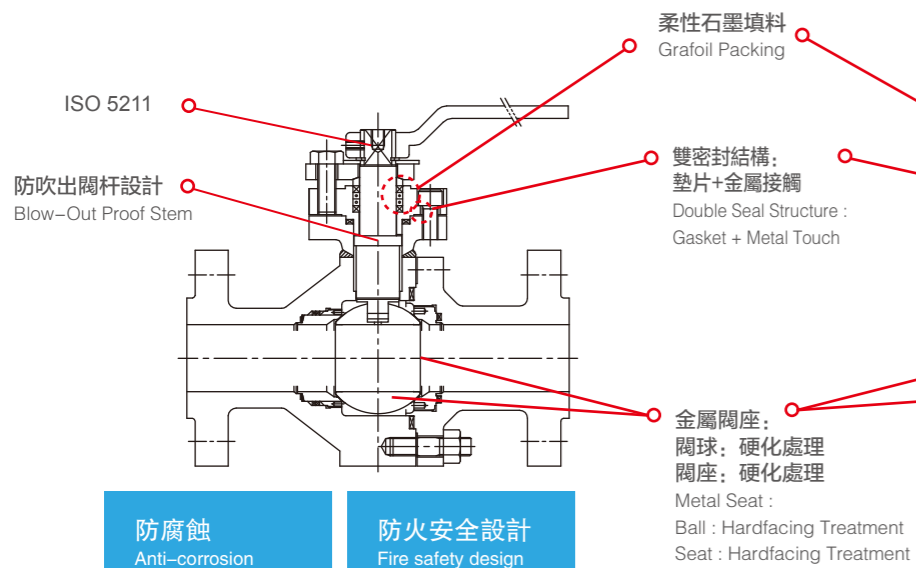
Metal Seat Ball Valve



壓力等級：150#~2500#	Pressure Rating: 150#~2500#
閥門尺寸：1/2" ~ 36"	Valve Size: 1/2" ~ 36"
應用溫度：-40°C~ 750°C	Temperature Range:-40°C~ 750°C
閥杆防吹出結構	Blow-out Proof Stem
火災安全設計	Fire Safety Design
閥球閥座硬化處理	Hardfacing Treatment
低洩漏結構設計 (ISO15848低洩漏認證)	Low Emission Structure Design (ISO15848 Certification)

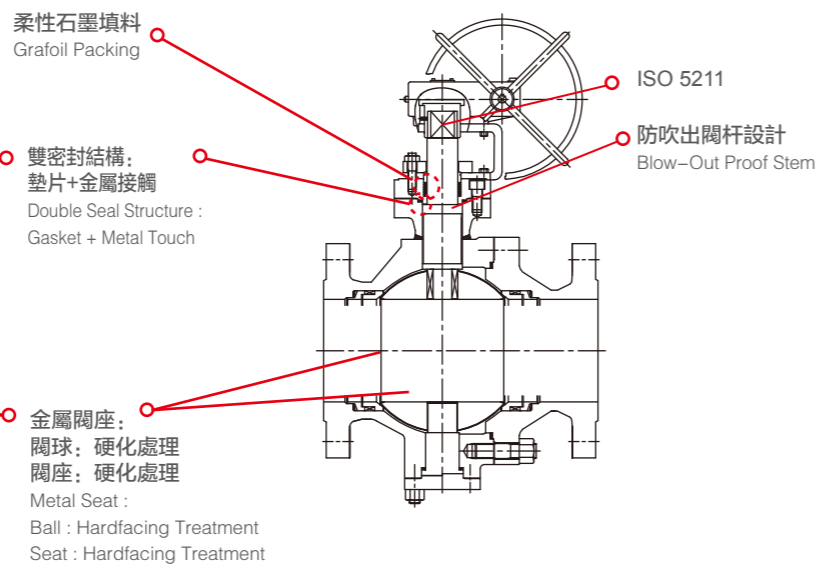
金屬閥座浮動球閥

Metal Seat Floating Type Ball Valve



金屬閥座固定球閥

Metal Seat Trunnion Type Ball Valve



球閥產品介紹

Ball Valves

V 型球閥

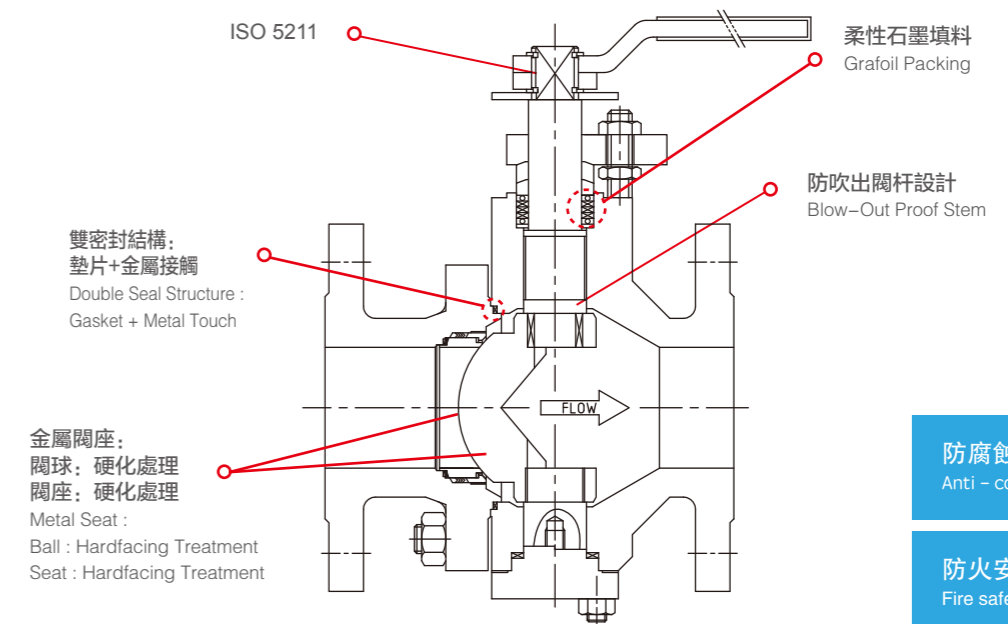
V - Type Ball Valve



壓力等級：150#~2500#	Pressure Rating: 150#~2500#
閥門尺寸：1/2" ~ 28"	Valve Size: 1/2" ~ 28"
應用溫度：-40°C~750°C	Temperature Range:-40°C ~750°C
閥杆防吹出結構	Blow-out Proof Stem
火災安全設計	Fire Safety Design
閥球閥座硬化處理	Hardfacing Treatment
低洩漏結構設計 (ISO15848低洩漏認證)	Low Emission Structure Design (ISO15848 Certification)

V型球閥

V-Type Ball Valve



球閥產品介紹

Ball Valves

頂裝浮動球閥

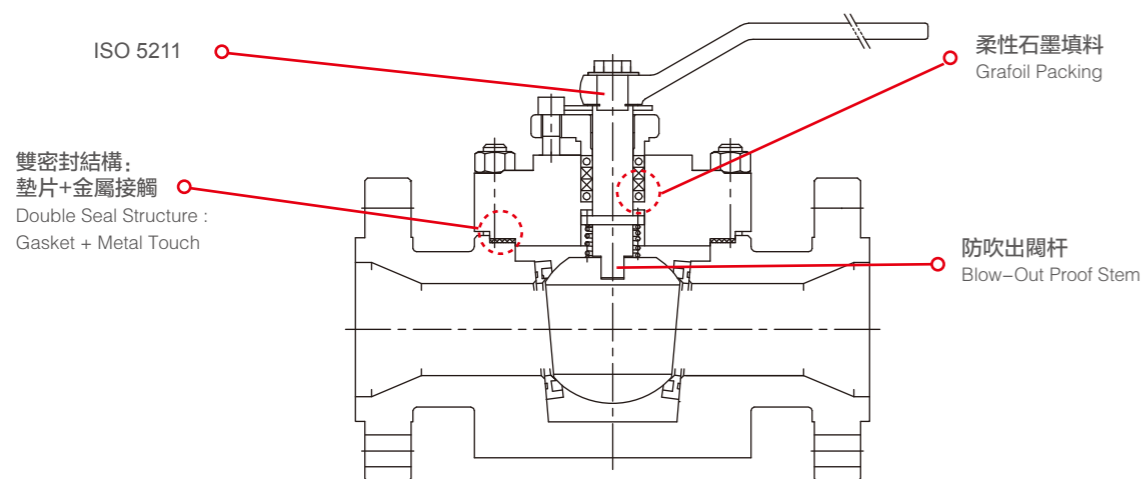
Top Entry Floating Ball Valve



壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2" ~ 28"	Valve Size: 1/2" ~ 28"
應用溫度：-40°C~550°C	Temperature Range: -40°C ~550°C
閥杆防吹出結構	Blow-out Proof Stem
火災安全設計	Fire Safety Design
彈性閥座設計	Elastic Seat Design
低洩漏結構設計 (ISO15848低洩漏認證) Low Emission Structure Design (ISO15848 Certification)	

頂裝浮動球閥

Top Entry Floating Ball Valve



一體式閥體
One-piece body

防火安全設計
Fire Safe Design

易於維護
Easy Maintenance

球閥產品介紹

Ball Valves

頂裝固定球閥

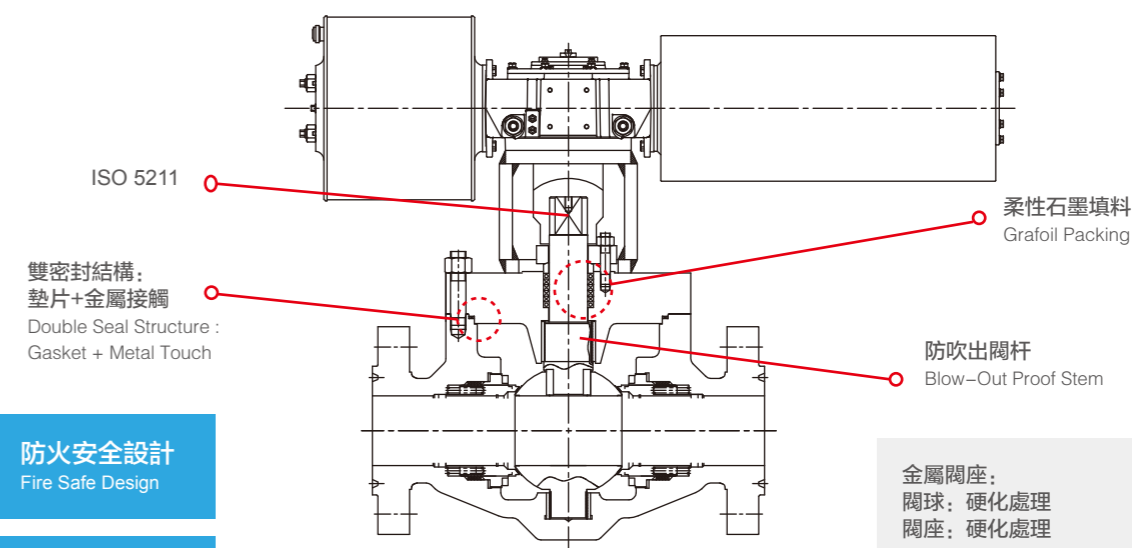
Top Entry Trunnion Ball Valve



壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2" ~ 28"	Valve Size: 1/2" ~ 28"
應用溫度：-40°C~550°C	Temperature Range: -40°C ~550°C
閥杆防吹出結構	Blow-out Proof Stem
火災安全設計	Fire Safety Design
彈性閥座設計	Elastic Seat Design
低洩漏結構設計 (ISO15848低洩漏認證) Low Emission Structure Design (ISO15848 Certification)	

頂裝固定球閥

Top Entry Trunnion Type Ball Valve



防火安全設計
Fire Safe Design

一體式閥體
One-piece body

金屬閥座：
閥球：硬化處理
閥座：硬化處理
Metal Seat :
Ball : Hardfacing Treatment
Seat : Hardfacing Treatment

截止閥/閘閥/止回閥產品介紹

Globe/Gate/Check Valves



	截止閥 Globe Valve	閘閥 Gate Valve	止回閥 Check Valve
設計標準 Applied Design Code	ASME B16.34 / ASME Section VIII / ASME B16.5		
尺寸範圍 Size	1/2" ~ 72"		
壓力等級 Pressure Rating	150# ~ 2500#		
面到面標準 Face to Face Dimension	ASME B16.10		
溫度範圍 Temp. Range	-40°C ~ 550°C		
密封等級 Allowable Leakage	API598		
閥體材質 Body Material	鈦材 / 鋳材 / 哈氏合金 / 蒙乃爾 / 英科乃爾 / 雙相鋼 / Incoloy 等 Titanium / Zirconium / Hastelloy / Monel / Inconel / Duplex / Incoloy etc.		
硬化處理 Hard Facing	氮化處理, 司特立, 鎳合金處理 Nitride treatment, Stellite, Nickel alloy treatment		
閥座形式 Seat Type	自由閥板設計 Free valve plate design	實體閥板設計 Solid valve plate design	旋啟式 / 升降式 / 雙板止回閥 Swing / Lift / Dual Plate
操作 Operation	手輪 / 齒輪箱 / 氣動 / 電動 Handwheel / Gear / Pneumatic / Electric Motor		N/A

截止閥產品介紹

Globe Valves

螺栓壓蓋形式截止閥

Bolted Bonnet Type Globe Valve



壓力等級 : 150#~1500#

Pressure Rating: 150#~1500#

閥門尺寸 : 1/2"~24"

Valve Size: 1/2"~24"

應用溫度 : -40°C~ 550°C

Temperature Range: -40°C~550°C

自由閥板形式

Free Disc Type

倒密封設計

Back Seated Structure

閥板硬化處理

Hard Facing for Disc

螺栓壓蓋式截止閥

Bolted Bonnet Type Globe Valve

閥體

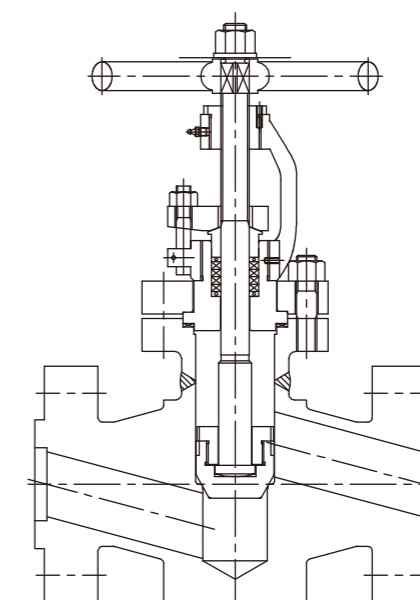
材料:
壁厚滿足ASME B16.5或B16.34
Body :
Material
ASME B16.5 or B16.34 (or Thicker) is
applied to material thickness

閥板:

柱塞式自對中結構
Disk :
Plug type, self alignment with hard
facing

閥座:

一體式閥座
Seat :
Integral Seat



支架:
抗磨損的鋁青銅
Yoke Bushing :
Aluminum bronze for anti-galling

閥杆:
滲氮處理
Stem :
Nitriding treatment for anti-galling

截止閥產品介紹

Globe Valves

壓力密封形式截止閥

Pressure Seal Type Globe Valve



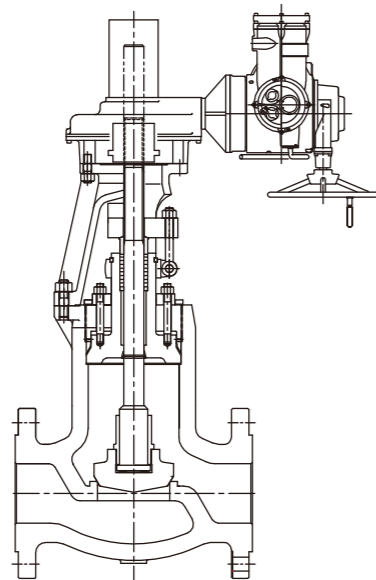
壓力等級：150#~2500#	Pressure Rating:ASME 150#~1500#
閥門尺寸：1/2"~24"	Valve Size: 1/2"~24"
應用溫度：-40℃~ 550℃	Temperature Range: -40℃~ 550℃
自由閥板形式	Free Disc Type
倒密封設計	Back Seated Structure
閥板硬化處理	Hard Facing for Disc

壓力密封形式截止閥

Pressure Seal Type Globe Valve

閥板：
柱塞式自對中結構
Disk：
Plug type, self alignment with hard facing

閥座：
一體式閥座
Seat：
Integral Seat



支架：
抗磨損的鋁青銅
Yoke Bushing：
Aluminum bronze for anti-galling

閥杆：
滲氮處理
Stem：
Nitriding treatment for anti-galling

閘閥產品介紹

Gate Valves

閘閥

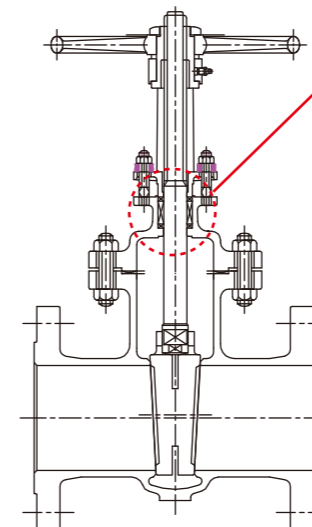
Gate Valve



壓力等級：150#~3500#	Pressure Rating:150#~3500#
閥門尺寸：1/2"~24"	Valve Size: 1/2"~24"
應用溫度：-40℃~ 550℃	Temperature Range: -40℃~ 550℃
自由閥板形式	Free Disc Type
倒密封設計	Back Seat Structure
閥板硬化處理	Hard Facing for Disc

螺栓壓蓋式閘閥

Bolted Bonnet Type Gate Valve



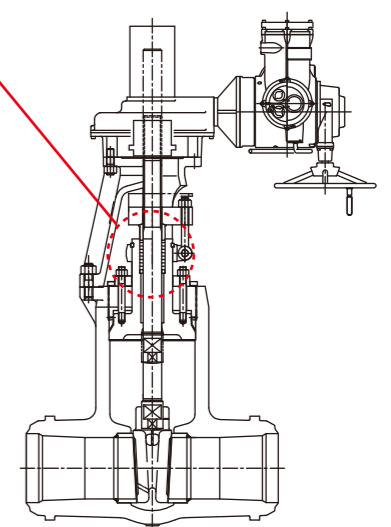
少維護
更好的密封比金屬墊片確保低維護和零洩漏
Low Maintenance
Better sealing compared to Metal Gasket allows for low maintenance and Zero Leakage.

* 2英寸及以上的支架有推力軸承，以儘量減少操作扭矩
**2 inch and larger Yoke Sleeve has thrust bearings to minimize operating torque.

硬面的密封
柔性石墨墊片的密封確保零洩漏
Hard Facing Application
Grafoil gasket seal results in Zero Leakage

壓力密封形式閘閥

Pressure Seal Type Gate Valve



止回閥產品介紹

Check Valves

升降式止回閥

Lift Type Check Valve



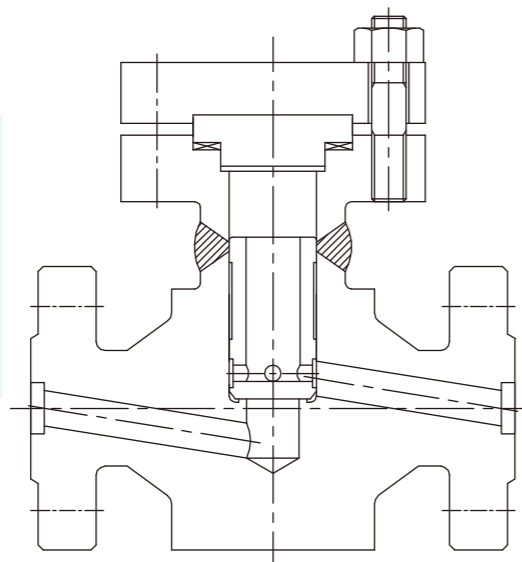
壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2"~12"	Valve Size: 1/2"~12"
應用溫度：-40℃~550℃	Temperature Range: -40℃~550℃
非彈性閥板	Solid Disc Type
閥板硬化處理	Hard Facing for Disc

升降式止回閥

Lift Type Check Valve

閥體

材料：
壁厚滿足ASME B16.5 或 B16.34
Body：
Material
ASME B16.5 or B16.34 (or Thicker) is
applied to material thickness



閥板：
柱塞式自對中結構
Disk：
Plug type, self alignment with hard
facing

閥座：
一體式閥座
Seat：
Integral Seat

止回閥產品介紹

Check Valves

旋啟式止回閥

Swing Type Check Valve

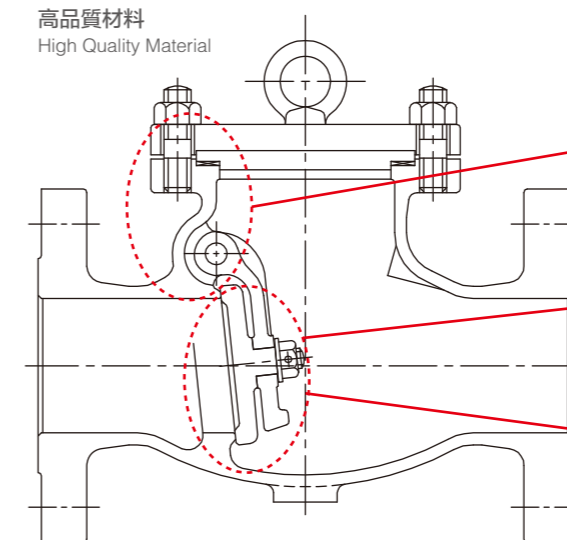


壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2"~24"	Valve Size: 1/2"~24"
應用溫度：-40℃~550℃	Temperature Range: -40℃~550℃
非彈性閥板	Solid Disc Type
閥板硬化處理	Hard Facing for Disc

旋啟式止回閥

Swing Type Check Valve

高品質材料
High Quality Material



懸掛吊臂
Hung-down type Hinge Lever

閥板與銷軸表面硬化處理
Hard Facing for Pin and Disc

自對中閥板
Self Alignment Disc

止回閥產品介紹

Check Valves

雙板止回閥

Dual Plate Type Check Valve

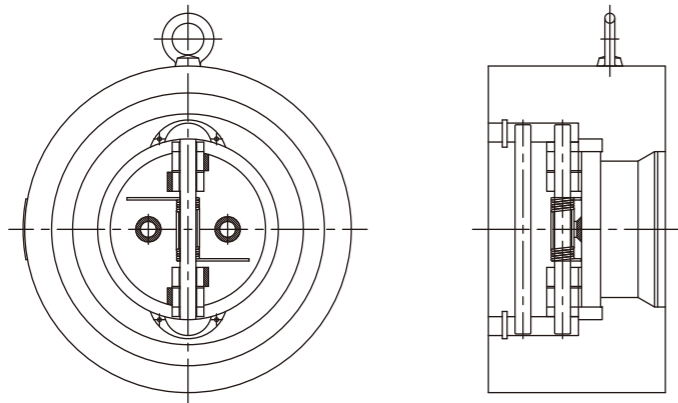


壓力等級 : 150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸 : 1/2"~72"	Valve Size: 1/2"~72"
應用溫度 : -40°C~550°C	Temperature Range: -40°C~550°C
非彈性閥板	Solid Disc Type
閥板硬化處理	Hard Facing for Disc

雙板止回閥

Dual Plate Check Valve

極小壓降
Minimum pressure drop



彈簧分別對每個閥板單獨受力
+閥板開啟與流體流動方向一致
Spring load applies to each disk independently
+Each disk turns properly coinciding with flow condition

密封性能優，關閉更嚴密
Tight Shut

高品質彈簧
High quality springs

使用壽命更長
Long Durability

罐底閥、蝶閥、低溫閥產品介紹

Tank Valves、Butterfly Valve、Cryogenic Valves



	閥板內置式罐底閥 Inside Disc Tank Valve	閥板外置式罐底閥 Outside Disc Tank Valve	RAM罐底閥 Ram Type Tank Valve	蝶閥 Butterfly Valve	低溫閥 Cryogenic Valve
設計標準 Applied Design Code	ASME B16.34 / ASME Section VIII / ASME B16.5				
尺寸範圍 Size	1" ~ 24"			2" ~ 48"	1/2" ~ 24"
壓力等級 Pressure Rating	150# ~ 1500#			150# ~ 900#	150# ~ 1500#
面到面標準 Face to Face Dimension	ASME B16.10				
溫度範圍 Temp. Range	-40°C ~ 550°C			-40°C ~ 350°C	-196°C ~ 350°C
密封等級 Allowable Leakage	API598				
閥體材質 Body Material	鈦材 / 鋯材 / 哈氏合金 / 蒙乃爾 / 英科乃爾 / 雙相鋼 / Incoloy 等 Titanium / Zirconium / Hastelloy / Monel / Inconel / Duplex / Incoloy etc.				
閥座形式 Seat Type	分體式閥座 Split Seat	分體式閥座 / 一體式閥座 Split Seat / Integral Seat		石墨/金屬 Graphite / Metal	PCTFE/金屬 PCTFE / Metal
硬化處理 Hard Facing	滲氮處理 / 堆焊 Gas Nitride / Weld			堆焊 Weld	堆焊 Weld
類型 Type	自由閥板設計 Free valve plate design				
操作 Operation	手動 / 齒輪箱 / 氣動 / 電動 Handwheel / Gear / Pneumatic / Electric Motor				

罐底閥產品介紹

Tank Valves

閥板內置式罐底閥

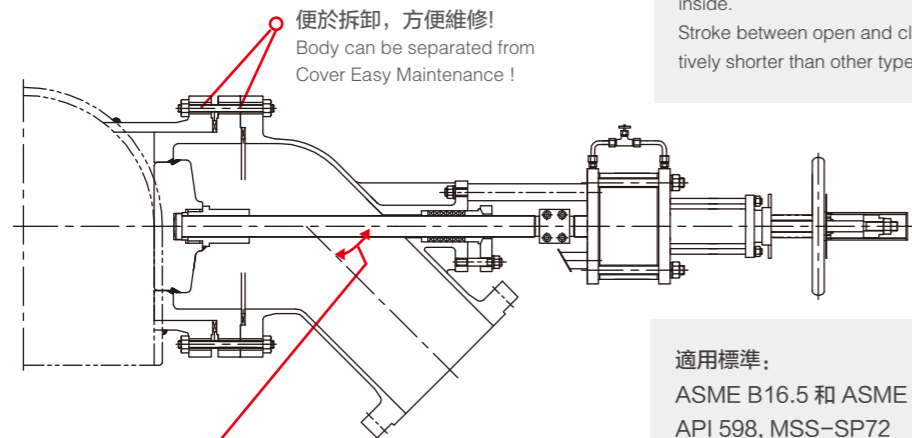
Inside-Disc Type Tank Valve



壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2"~24"	Valve Size: 1/2"~24"
應用溫度：-40°C~550°C	Temperature Range: -40°C~550°C
自由閥板形式	Free Disc Type
閥板硬化處理	Hard Facing for Disc

閥板內置式罐底閥

Inside-Disc Type Tank Valve



便於拆卸，方便維修！
Body can be separated from
Cover Easy Maintenance !

這種類型通常用於攪拌罐內。
打開和關閉之間的行程比其他類型的短。
This type is usually used for a tank with stirrer
inside.
Stroke between open and close is compara-
tively shorter than other types.

適用標準：
ASME B16.5 和 ASME B16.34,
API 598, MSS-SP72
Applicable Standards:
ASME B16.5 and ASME B16.34 API 598,
MSS-SP72

各自的角度為45 / 60 / 90度可以適用
Respective angle as 45 / 60 / 90 degree can be
applicable

罐底閥產品介紹

Tank Valves

閥板外置式罐底閥

Outside-Disc Type Tank Valve

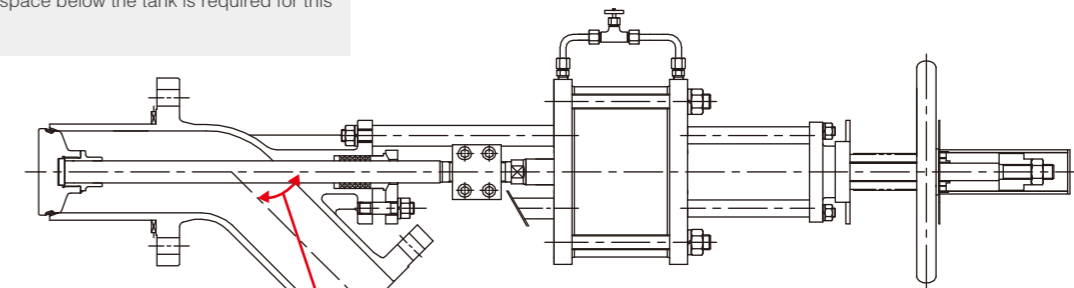


壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2"~24"	Valve Size: 1/2"~24"
應用溫度：-40°C~550°C	Temperature Range: -40°C~550°C
自由閥板形式	Free Disc Type
閥板硬化處理	Hard Facing for Disc

閥板外置式罐底閥

Outside-Disc Type Tank Valve

此形式閥門適合用於罐底無攪拌的結構。
適合罐底空間較小的罐底閥。
This type is usually used for a tank without stirrer
inside.
Smaller space below the tank is required for this
type.



各自的角度為45 / 60 / 90度可以適用
Respective angle as 45 / 60 / 90 degree can be
applicable

適用標準：
ASME B16.5 和 ASME B16.34,
API 598, MSS-SP72
Applicable Standards:
ASME B16.5 and ASME B16.34, API 598,
MSS-SP72

罐底閥產品介紹

Tank Valves

RAM形式罐底閥 RAM Type Tank Valve



壓力等級：150#~1500#	Pressure Rating: 150#~1500#
閥門尺寸：1/2"~18"	Valve Size: 1/2"~18"
應用溫度：-40℃~550℃	Temperature Range: -40℃~550℃
自由閥板形式	Free Disc Type
閥板硬化處理	Hard Facing For Disc

RAM形式罐底閥

RAM Type Tank Valve

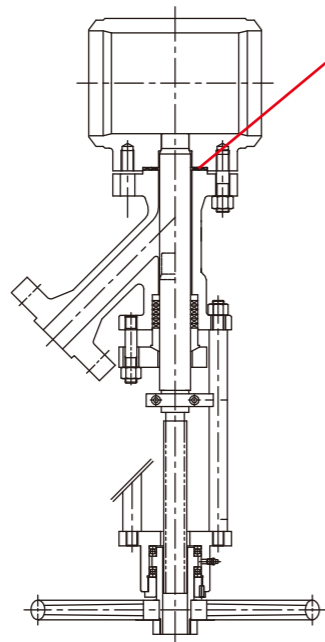
此類型閥門，閥桿與閥體之間幾乎沒有空腔。閥門適合用於漿料管線。
Cavity area between stem and body is minimized or almost nothing in this type. It is effective for slurry line.

萬向節：轉動手柄閥杆不轉動，防止閥座和閥桿劃傷

Universal Joint: the stem is not turning by turning the handle seat and stem are protected from scratches

可以水平和豎直安裝

It can be installed both horizontally and vertically



閥座部分採用可分離結構，易於拆分，便於維修。

The valve itself can be separated from the adapter to dismount the valve from the tank or piping. Easy Maintenance!

適用標準：

ASME B16.5和ASME B16.34,
MSS-SP72, API 598,
Applicable Standards:
ASME B16.5 and ASME B16.34
API 598, MSS-SP72

蝶閥產品介紹

Butterfly Valves

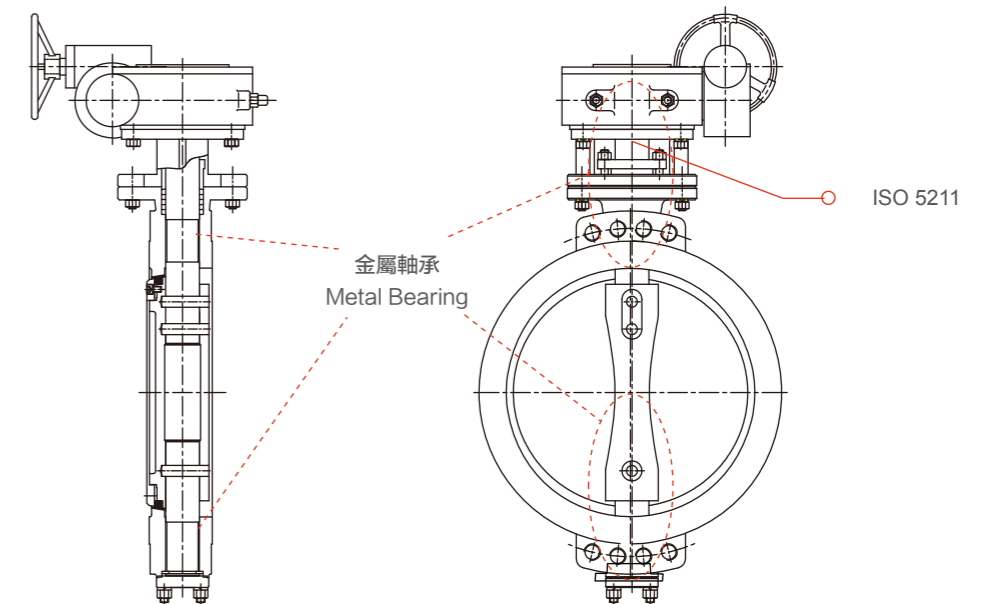
蝶閥 Butterfly Valve



壓力等級：150#~900#	Pressure Rating: 150#~900#
閥門尺寸：2"~48"	Valve Size: 2"~48"
應用溫度：-40℃~350℃	Temperature Range: -40℃~350℃
二偏心設計/三偏心設計	Double Offset Type/ Triple Offset Type
緊湊的設計	Compact Design

蝶閥

Butterfly Valve



低溫閥產品介紹

Cryogenic Valves

低溫閥

Cryogenic Valve



壓力等級：150#~900#

Pressure Rating: 150#~900#

閥門尺寸：1/2"~48"

Valve Size: 1/2"~48"

應用溫度：-196°C~350°C

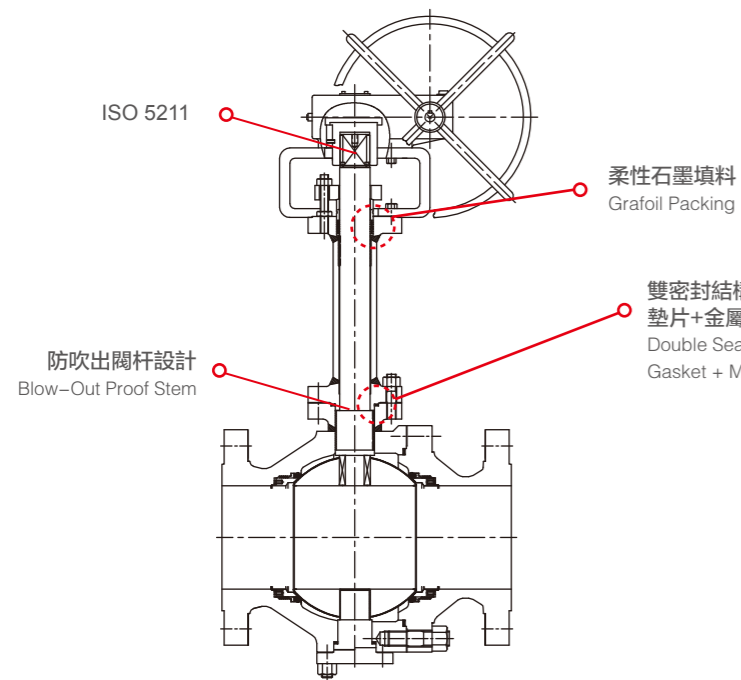
Temperature Range: -196°C~ 350°C

緊湊的設計

Compact Design

低溫閥

Cryogenic Valve



適用標準：
ASME B16.5和ASME B16.34,
MSS-SP72, AP I598
Applicable Standards:
ASME B16.5 and ASME B16.34,
API 598, MSS-SP72

旋塞閥產品介紹

Plug Valves

旋塞閥

Plug Valve



壓力等級：150#~900#

Pressure Rating: 150#~900#

閥門尺寸：1/2"~48"

Valve Size: 1/2"~48"

應用溫度：-40°C~350°C

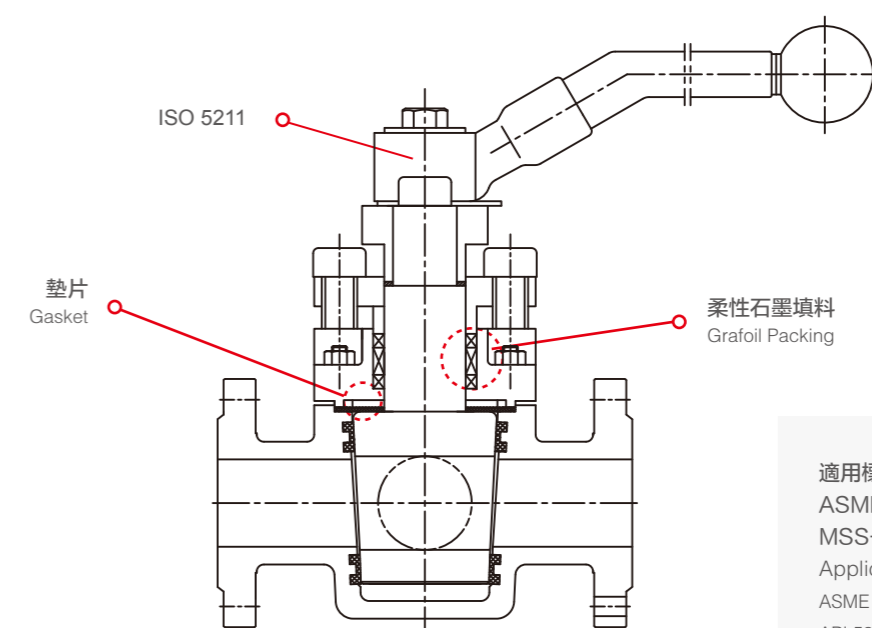
Temperature Range: -40°C~ 350°C

緊湊的設計

Compact Design

旋塞閥

Plug Valve



適用標準：
ASME B16.5和ASME B16.34,
MSS-SP72, AP I598
Applicable Standards:
ASME B16.5 and ASME B16.34,
API 598, MSS-SP72

裝配工藝流程+品質管理

Assembly Process+Quality Assurance

高標準的品質管理為客戶
提供高品質的閥門產品

High standards of quality management to provide the high quality valve products for customers

預潔室處理 (加工後)

Pre-Clean Room Process (After Machining)

零部件組裝
Parts

閥杆，閥座，壓蓋等
Stem, Seat Ring, Gland, Others...

閥體，端蓋
Body & Cover



流道光滑度檢測
Roughness Check For Port Surface

閥球
Ball



PMI



圓度檢測
Roundness Check



預潔室處理 (加工後)

Pre-Clean Room Process (After Machining)

清洗
Cleaning



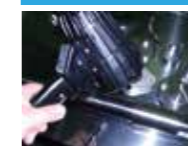
純水，超聲波清潔
Ultra sonic cleaner with pure water



吹掃，乾燥
Blow & Dry



黑光檢測
Black Light Check



裝配
Assembly



氣壓測試
N₂&He Pressure Test



氦氣測試
He Test

氮氣測試
N₂ Test

脫油脫脂檢測
Degreasing & Water-Free Check



黑光檢測
Black Light Check



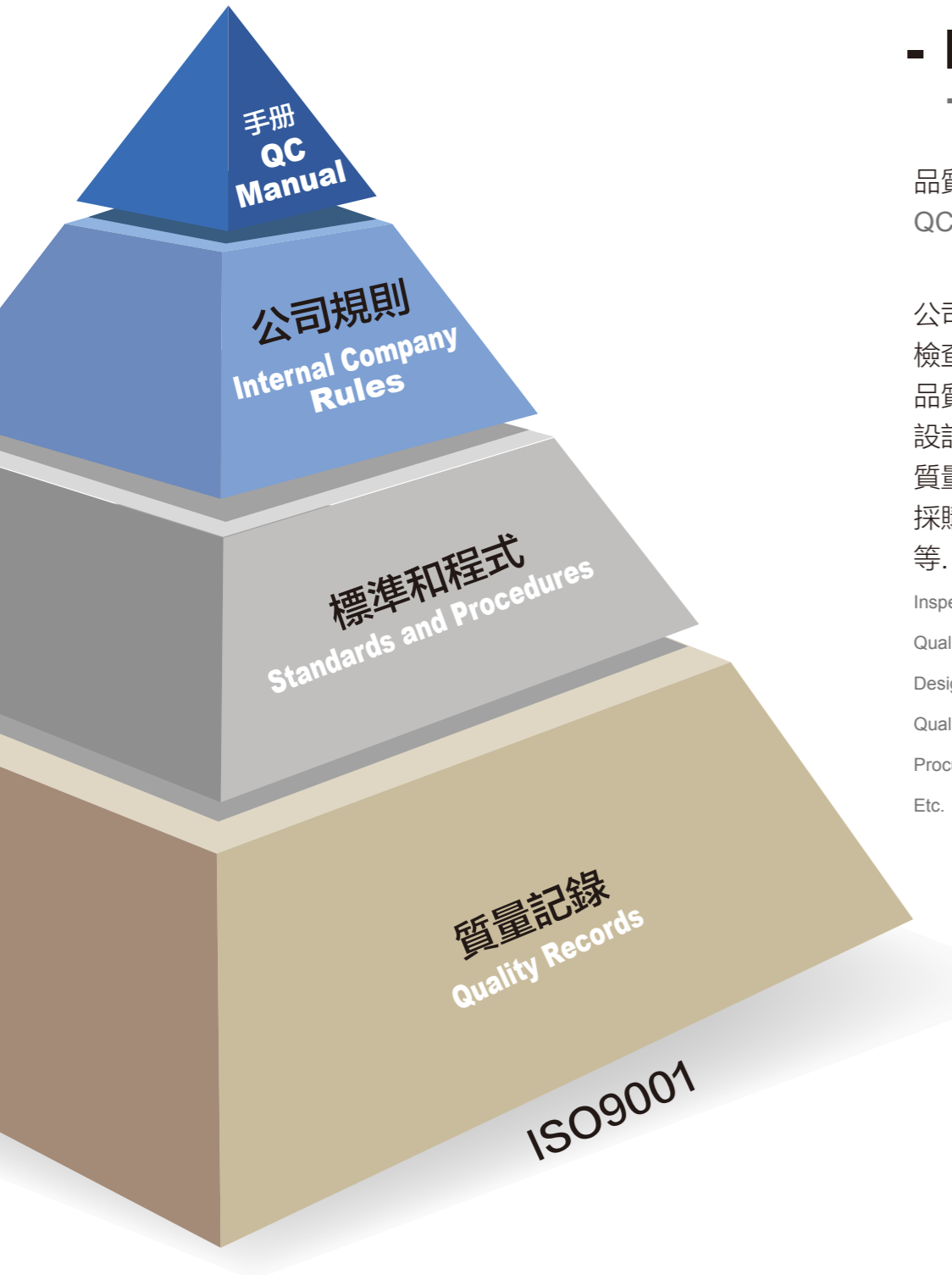
包裝
Packaging





IVT的品質保證體系

IVT's Quality Assurance System

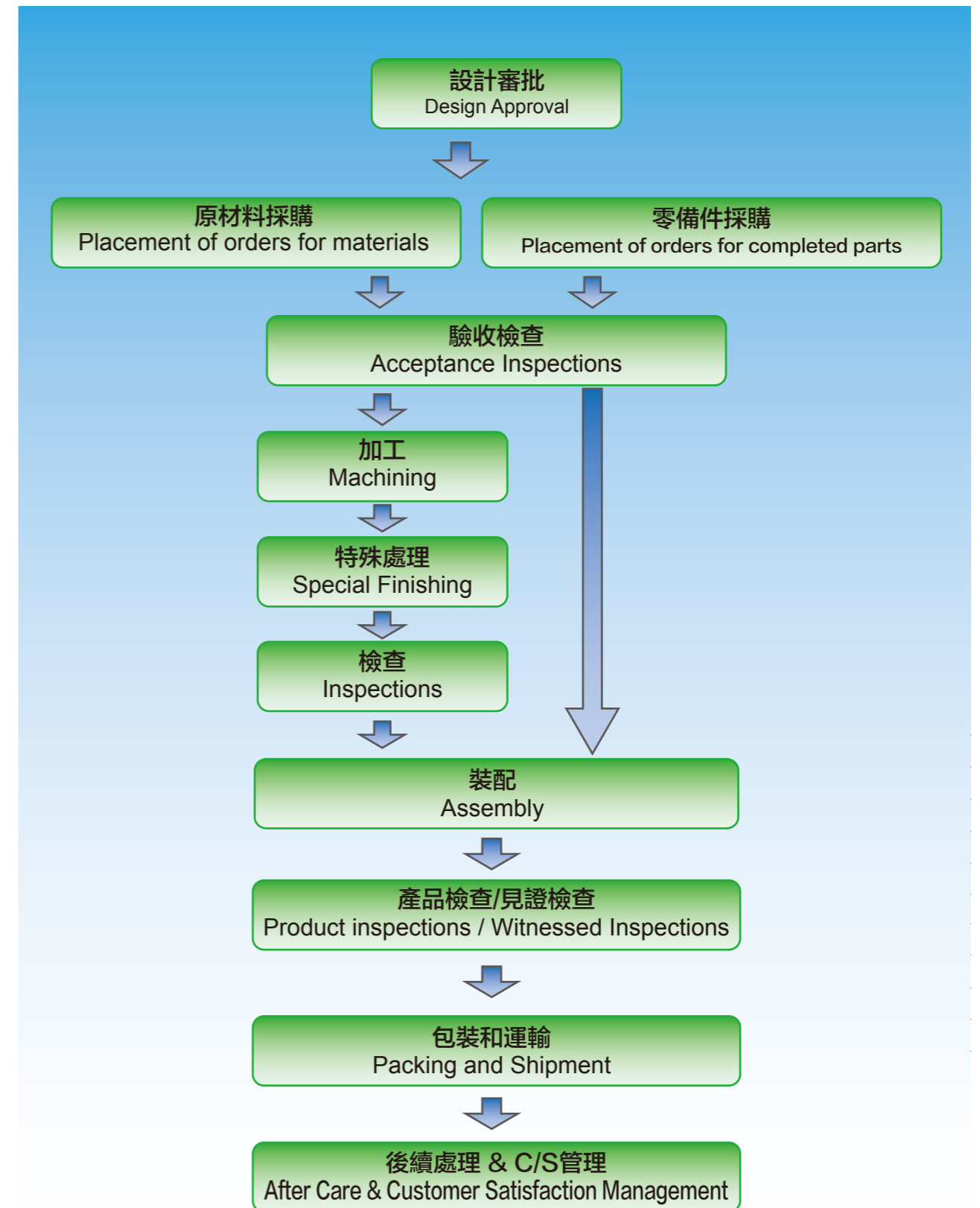


- IVT認證 - - IVT Code -

品質手冊: YQM-A001
QC Manual: YQM-A001

公司內部規章
檢查: YQM-B002
品質體系: YQM-B003
設計控制: YQM-B005
質量檔案: YQM-B006
採購: YQM-B007
等.

Inspections: YQM-B002
Quality System: YQM-B003
Design Control: YQM-B005
Quality Documents: YQM-B006
Procurement: YQM-B007
Etc.





公司組織架構

Organization Chart





主要客戶

Main Customers

Japan

Asahi Glass Co.,Ltd.
Asahi Kasei Corporation
Chiyoda Corporation
Daicel Chemical Industries,Ltd.
DIC Corporation
Hitachi Zosen Corporation
Hitachi,Ltd.
Idemitsu Kosan Co.,Ltd.
JGC Corporation
Kuraray Co.,Ltd.
Kureha Chemical Industry Co.,Ltd.
Lion Chemical Co.,Ltd.
M.SETEK Co.,Ltd.
Mitsubishi Chemical Corporation
Mitsubishi Gas Chemical Corporation
Mitsubishi Heavy Industries,Ltd.
Nippon Oil Corporation
Mitsubishi Rayon Co.,Ltd.
Mitsui Chemicals,Inc.
Mitsui Engineering & Shipbuilding Co.,Ltd.
Nippon Paper Industries Co.,Ltd.
Oji Paper Co.,Ltd.
Sekisui Chemical Co.,Ltd.
Shin-Etsu Chemical Co.,Ltd.
Showa Denko K.K.
Sumitomo Chemical Co.,Ltd.
Sumitomo Heavy Industries,Ltd.
Teijin Limited
Tokuyama Corporation
TonenGeneral Sekiyu K.K.
Toray Industries,Inc.
Tosoh Corporation
Toyo Engineering Corporation
Nissan Chemical Industries,Ltd.
JFE Steel Corporation
JNC Corporation
Kao Corporation
UBE Industries,Ltd.
Kishu Paper Co.,Ltd.

China

Sinopec Engineering(Group)Co. Ltd.
B.P. Zhuhai Chemical Co.,Ltd.
Chongqing Pengwei Petrochemical
Datang Coal to Gas Co.,Ltd.
Greengene Co.,Ltd.
Guizhou Crystal Organic Chemical (Group)
Jialong Petrochemical Fiber
Jiangsu Hailun Petrochemical Co.,Ltd.
Shanghai Petrochemical Co.,Ltd.
Shaoxing Yuandong Petrochemical Co.,Ltd.
Shenhua Ningxia Coal Industry Group
Tianjin Petrochemical Co.,Ltd.
Xiang Lu Petrochemical Co.,Ltd.
Xinneng Energy Ltd.
Yisheng Dahua Petrochemical Co.,Ltd.
Yizheng Chemical Fiber Co.,Ltd.
Jiangsu Honggang
Jiaxing Petro Chemical Co.,Ltd.
Jingding Engineering & Construction
China Prosperity (Jiangyin) Petrochemical Co.,Ltd.
Hebi Coal Chemical Group
Luoyang Petrochemical Engineering
Sunshine Petrochemical Co.,Ltd.
Zhenjiang Chimei Chemical Co.,Ltd.
Asahi Kasei Corporation(China)
Ningbo Mitsubishi Chemical Company
Zijin Mining Group
Fujian Petrochemical Group
PTM Engineering Plastics (Nantong) Co., Ltd.

Korea

HK Silicon
Hyosung Corporation
OCI Company Ltd.
Sam Nam Petrochemical Co.,Ltd.
Samsung Fine Chemical Co.,Ltd.
SK Chemical Co.,Ltd.
Synthetic Fiber Co.,Ltd.
Taekwang Industrial Co.,Ltd.
Hyundai Engineering Co.,Ltd.
Daelim Industrial Co.,Ltd.
Posco Engineering
Hanwha Chemical

Taiwan

CAPCO
CTCI Corporation
OPTC
Chang Chun Petrochemical Co.,Ltd.
FC & FC Corporation
Nan Ya Plastics Corporation
Tuntex Petrochemicals Inc.
Formosa Plastics Group
Nuntex Industry Co.,Ltd
Taiwan ITRJ
Corum Inc.
OUCC
FUCC
LCY Chemical Corp.

Other Countries

AMOCO
Federal Hardware Engineering Co.,Ltd.
Indian Oil Co.,Ltd.
Kuwait National Petrochemical Company
Lonza Petrochemical Co.,Ltd.
MCC PTA India Co.,Ltd.
PIDMCO Iran
PT Asia Pacific Fibers Tbk.
PT DSM KALTIM
Iran PTA Corporation
Petro Rabigh
PT Pupuk Kujang
Pertamina
Rio Tuba Nickel Mining Corporation
Score Pty.,Ltd.
Shintec USA
Siam Mitusi PTA Co.,Ltd.
Sumitomo Chemical Singapore
Thai Organic Co.,Ltd.
TPT Co.,Ltd.
Asia Pacific Fibers Tbk
SABIC
M&G Group
Emerson
Pardis Petro Chemical Co.,Ltd.



公司概要 Company

- 主要產品**
Main Product
- 特種合金閥門／鈦材、鑄材、哈氏合金、鎳、雙相鋼及其它材料
Super Alloy Valves / Titanium・Zirconium・Hastelloy・Nickel・Duplex SS and Other exotic metals
 - 高性能閥門／高溫、高壓閥門
Hi-Power Valves / High Temperature, High Pressure Valve
 - 一般材質閥門／不銹鋼、WCB等
General Valves / Stainless Steel, WCB etc
 - 低溫閥
Cryogenic Valve

- 主要檢查設備**
Testing & Inspection Equipment
- | | | |
|--|--|--|
| 01. 低洩漏檢測設備
Helium leak detectors | 06. 三座標儀
Coordinate measuring machine | 11. X射線分析裝置(NITON XLt898HeW)
X-ray fluorescence spectrometer(NITON XLt898Hew) |
| 02. 水壓檢測設備
Hydraulic pressure water test device | 07. 圓度測量儀
Circularity measuring equipment | 12. 顯微鏡
Microscope |
| 03. 氣壓檢測設備
Pneumatic pressure test device | 08. 厚度計
Ultrasonic roughness meter | 13. 硬度計
Hardness testing machine(EQUOTIP) |
| 04. 液壓檢測設備 3台
Hydraulic pressure oil test device(Three machine) | 09. 膜厚計
Film thickmeter | 14. 維氏硬度檢測儀
Microhardness testing machine(micro-vikers) |
| 05. 粗糙度檢測設備
Surface roughness measurement device | 10. 精密質量測定器
Accurate mass measuring machine | |

- 主要生產設備**
(主要協力会社を含む)
Outline of Production Facilities
- | | | |
|---|--|---|
| 01. 縱置加工中心
Vertical type machining centers | 05. 鑽床
Radical drilling machines | 09. 立式珩磨機
Vertical honing machines |
| 02. 橫置加工中心
Horizontal type machining centers | 06. 立式鑽床
Vertical drilling machines | 10. 立式插槽機
Vertical slotting machines |
| 03. 數控車床
Numerically controlled universal lathes | 07. 外圓磨床
Cylindrical grinders | |
| 04. 數控鏜床
Numerically controlled boring machines | 08. 平面磨床
Surface grinders | |

海外拠点 北京代表處、Inter-Valve Technology 新加坡分公司。
Global Network Beijing Liaison Office, Inter-Valve Technology Singapore Inc.

公司歷程 History

- | | |
|---|---|
| 1928年 東京都港區成立吉田工廠 | 1928 Started as a sole proprietorship "YOSHIDA FACTORY" in Minato-ku, Tokyo Japan. |
| 1938年 工廠搬遷到東京都大田區，開始鑄件加工 | 1938 Moved the factory to Ota-ku Tokyo, as start-to-finish production factory from casting to processing. |
| 1942年 建立第二工廠，開始為電力和石油生產閥門 | 1942 Built the second factory in Ota-ku Tokyo, started manufacturing valves for electricity and oil pressure use. |
| 1945年 二戰後第二工廠重新開工，生產船廠消防用閥門 | 1945 Second factory restarted after the war and started manufacturing valves for marine application-fire extinguishing devices. |
| 1951年 公司改名為吉田有限公司 | 1951 Incorporated as Yoshida Factory Co., Ltd. |
| 1958年 開始生產火電用閥門 | 1958 Started manufacturing valves for fuel station of thermal power plant. |
| 1964年 大手建設會社開發液壓設備 | 1964 Developed the automatic hydraulic jack for major construction companies. |
| 1979年 開始研製鈦材閥門 | 1979 Started R&D for valves and these parts made of titanium. |
| 1984年 開始設計並發展面向大型建設公司的機器人 | 1984 Started Design and development of the robot for major construction companies, and started delivery. |
| 1985年 開始生產銷售鈦材球閥 | 1985 Started selling of the ball valve made of titanium. |
| 1988年 開始鈦材閥門的研製 | 1988 Started R&D for valves made of zirconium. |
| 1988年 開始研製消防用閥 | 1988 Started R&D for special valves for the fire extinguishing device use. |
| 1994年 開始製作並銷售石墨閥座閥門 | 1994 Acquired the authorization of the selection valve for carbon dioxide extinguishing facilities and started selling. |
| 2000年 公司取得ISO9001認證 | 2000 Acquired certification of ISO9001. |
| 2002年 公司更名為“Inter-Valve Technology (日本IVT閥門技術株式會社)” | 2002 Changed corporate name to "Inter-Valve Technology Corp." |
| 2005年 公司所有業務轉讓給子公司 | 2005 Transferred all business to subsidiary by company split. |
| 2012年 公司併入Eiki Shoji Group | 2012 Eiki Shoji Group succeeded all business from the subsidiary by business transfer. |