



ISO9001



API607



6D-0559



1155



TS2710457



ISO 14001



OHSAS 18001



SPECIAL ALLOY VALVES

Titanium Alloy Valves

Zirconium Alloy Valves

Nickel Alloy Valves

Hastelloy Alloy Valves

Inconel Alloy Valves

Incoloy Alloy Valves

Monel Alloy Valves

Duplex Steel Valves



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WEIDOU LI VALVES CO., LTD.

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Weidouli company committed to the manufacturing of exotic material valves since 1989, with long term history and abundant experience on severe service valves for critical applications.

Valves can be designed, manufactured, assembled and tested in accordance with ANSI/API/ASME norms, DIN/ ISO/BS specifications, NORSOK requirements, JIS standards and tailor-made.

Weidouli factory area 43500m², with modern technology and the new facilities including CNC machine shop, fabrication and inspection and test facilities.

Weidouli advanced manufacturing processes enable to produce a wide range of valves from bars and forgings, castings. Moreover, sizeable stock allows Weidouli to offer a broad selection of exotic materials whilst keeping production time to a minimum.

Weidouli have ISO 9001/API 6D/ISO 14001 OHSAS 18001/API 607/API 6FA/CE/EAC/ATEX/ISO 15848/ TS etc. qualifications to guarantee the realizable quality.

Weidouli system includes the selection of raw material from approved vendors, and rigorous oversight of our manufacturing process that is vital to quality control.

Our extensive quality control system carefully monitors our manufacturing processes to assure a product that performs to the highest industry standards. Quality assurance procedures include 100% hydrostatic and pneumatic testing of all valves in full conformance to applicable API standards and industry codes.



API 6D API 607/6FA ISO9001 CE 1155 ATEX



SIL ISO 14001 OHSAS 18001 EAC TS ISO 15848-1

Cooperate Sincerely Create Win-win

The history of Weidouli dates back to 1989, the initial company named Lixin established in that year with prospective view to begin with exotic material valves manufacturing. With an increase of its production capacity and satisfaction of domestic and oversea clients' requirements, Weidouli furnish with a new modern factory filled with advance and large CNC machine facilities.

Weidouli has worked diligently in past decades to secure our advantageous industry position and become a highly respected and valuable enterprise to the area of anti-corrosive valves application and come to being an culture: Cooperate Sincerely, Create Win-win.

Weidouli will continue to play a good role and make its unceasing efforts in the valve markets with our goals in mind : Global Quality, Total Reliability.

CEO, Chengrui Xia

Solution for Anti-corrosive Valve

Weidouli valves for critical applications in chemical and petrochemical process (PTA process, Acetic acid, sulfuric and nitric acid, and chlorine services ,Caustic Soda etc.), Onshore/Offshore (Desalination processing, oil/water separation, Fire Fighting, Cooling system) , FPSO/FSO, Oil&Gas, Water treatment, Refinery, Pulp & Paper, Mining, Power generation etc.




Petro-Chemical

- Utilities
- Potable Water
- PTA Process
- Acetic Acid Process



Offshore Oil&Gas

- Seawater Injection
- Oil/Water Separation
- Fire Fighting
- Cooling System
- Ballast System



Pulp&Paper Industries

- CLO2 Bleaching System
- Displacement Cooking Process
- Black Liquid Evaporator
- Waste Water&Acid Recovery



LNG

- Fire Water Ring Main
- Cooling System
- Ballast Water Treatment
- Utilities



Power Generation

- Power Generation
- Sea Water Inlets
- Cooling System
- Desalination
- Desulfurize
- Utilities



Naval Marine

- HVAC
- Ballast System
- Chilled Water
- Grey Water
- Black Water
- Fuel System



Contract evaluation



Design evaluation



Product design



Vacuum foundry



Incoming inspection



Wall thickness test



Metallographic analysis



Vacuum heat treatment



Direct-reading spectrometer



Mechanical test



Chemical analysis



Spectral test



Hardness test



Liquid permeate test



Ultrasonic non-destructive inspection



Coordinate measuring machine



Supersonic spray



QC inspection



Vacuum welding



CNC grinding ball



Driller



CNC machining



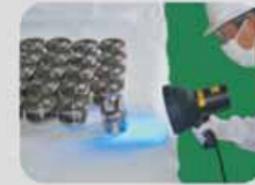
Machining center



Horizontal machining lathe



Vacuum hardness treatment



Oil test by Ultraviolet Rays



Cleaning room



Assembly



Pressure test



Dechlorination equipment



After sale service



Packing & shipment



Finished products warehouse



QC inspection



Iron pollution test



Ultrasonic cleaning

[Http : //www.wsv-valve.com](http://www.wsv-valve.com)

Weidouli valves functional quality management system complies with ISO9001 and API6D requirements to ensure production process maintain international safety and quality standard.

Weidouli valves complete production process from start to finish: design, manufacture, test and sale, products are tested rigorously and certified for quality assurance, is carried out with safe highest quality and to be one of global best corrosion resistant valve manufacturer in mind.



WSV CRM&MES System



SPECIAL ALLOY MATERIAL SERIES

| | Material Group | Forgings | Castings | Bars | |
|---|-----------------------|------------------------|--------------------|---------------|-------------|
| | | Spec.No.Grade | Spec.No.Grade | Spec.No.Grade | |
| Titanium alloy | Titanium | | | | |
| | Titanium Gr. 2 | B381 Gr. F-2 | B367 Gr. C-2 | B348 Gr. 2 | |
| | Titanium Gr. 3 | B381 Gr. F-3 | B367 Gr. C-3 | B348 Gr. 3 | |
| | Titanium alloy | | | | |
| | Titanium Gr. 5 | B381 Gr. F-5 | B367 Gr. C-5 | B348 Gr. 5 | |
| | Titanium Gr. 6 | B381 Gr. F-6 | B367 Gr. C-6 | B348 Gr. 6 | |
| | Titanium Gr. 12 | B381 Gr. F-12 | B367 Gr. C-12 | B348 Gr. 12 | |
| | Titanium Gr. 7 | B381 Gr. F-7 | B367 Pd7B | B348 Gr. 7 | |
| Nickel base alloy | Ni | | | | |
| | Nickel200 | B564 N02200 | A494 CZ100 | B160 N02200 | |
| | Nickel201 | B160 N02201 | | B160 N02201 | |
| | Ni-alloy | | | | |
| | Monel 400 | B564 N04400 | A494 M35-1/M35-C | B164 N04400 | |
| | Monel K500 | B865 N05500 | | B865 N05500 | |
| | Inconel 600 | B564 N06600 | A494 CY40 | B166 N06600 | |
| | Inconel 625 | B564 N06625 | A494 CW6MC | B446 N06625 | |
| | Incoloy 800 | B564 N08800 | A351 CT15C | B408 N08800 | |
| | Incoloy 800H | B564 N08810 | | B408 N08810 | |
| | Incoloy 825 | B564 N08825 | A494 CU5MCuC | B425 N08825 | |
| | Hastelloy B | B335 N10001 | A494 N12MV | B335 N10001 | |
| | Hastelloy B-2 | B462 N10665 | A494 N7M | B335 N10665 | |
| | Hastelloy C276 | B564 N10276 | A494 CW12MW / CW6M | B574 N10276 | |
| | Hastelloy C-22 | B564 N06022 | A494 CX2MW | B574 N06022 | |
| | Hastelloy C-4 | B574 N06455 | A494 CW2M | B574 N06455 | |
| | Hastelloy G | B462 N06007 | | B581 N06007 | |
| | Hastelloy G30 | B462 N06030 | | B581 N06030 | |
| | Zirconium | Zirconium702 | B493 R60702 | B752 702C | B550 R60702 |
| | | Zirconium705 | B493 R60705 | B752 705C | B550 R60705 |
| Duplex stainless steel | | | | | |
| Duplex S31803 | A182 F51(2205) | A890/A995 4A(CD3MN) | A276 S31803 | | |
| Super-Duplex S32750 | A182 F53(2507) | A890/A995 5A(CE3MN) | A276 S32750 | | |
| Super-Duplex S32760 | A182 F55 | A890/A995 6A(CD3MWCuN) | A276 S32760 | | |
| Super austenitic stainless steel | | | | | |
| 904L | A182 F904L | | B649 N08904 | | |
| 254SMO | A182 F44 | A351 CK3MCuN | A276 S31254 | | |
| AL-6XN | B462 N08367 | A351 CN3MN | B688 N08367 | | |
| Alloy 20 | A182 F20/B462 N08020 | A351 CN7M | B473 N08020 | | |
| austenitic stainless steel | | | | | |
| 304 | A182 F304 | A351 CF8 | A276 304 | | |
| 304L | A182 F304L | A351 CF3 | A276 304L | | |
| 316 | A182 F316 | A351 CF8M | A276 316 | | |
| 316L | A182 F316L | A351 CF3M | A276 316L | | |
| 316Ti | A182 F316Ti | | A276 316Ti | | |
| 317 | A182 F317 | A351 CG8M | A276 317 | | |
| 317L | A182 F317L | A351 CG3M | A276 317L | | |
| 347 | A182 F347 | A351 CF8C | A276 347 | | |
| 310 | A182 F310 | A351 CK20 | A276 310 | | |
| 310S | A182 F310S | A351 CK20 | A276 310S | | |
| Copper | Copper alloy | | | | |
| | Ni-Al-Br | | B148 C95800/C95500 | | |

The above materials are applicable to valve shell. Contact WSV for the valve component materials. Trademarks appeared on the book: SandvikAB for SAF2205/ SAF2507 SPECIALS METALS for Inconel, Monel, Incoloy, Haynes for Hastelloy Allegheny Ludlum for AL-6XN Avesta for 254SMO, SUMITOMO for DP3W/NAR.

MATERIAL CHARACTER AND APPLICATION

| | Material Group | Characteristics | Typical application | |
|-------------------|--|--|--|--|
| Titanium alloy | Titanium | | | |
| | Titanium Gr. 2 | High resistance to pitting, crevice corrosion resistance, High resistance to stress corrosion cracking, corrosion fatigue and erosion. | Chemical processes, oil refining and Pulp and paper mills equipment. | |
| | Titanium Gr. 3 | | | |
| | Titanium alloy | | | |
| | Titanium Gr. 5 | Higher strength with (Al, Mo, Sn, V). Higher corrosion resistance in reductic acid with Pt content. | Chemical processes, oil refining and Pulp and paper mills equipment. | |
| | Titanium Gr. 6 | | | |
| | Titanium Gr. 12 | | | |
| Titanium Gr. 7 | | | | |
| Nickel base alloy | Nickel | | | |
| | Nickel200 | Superior corrosion resistance to carbon acid solution such as soda calcium carbonate. | Alkali salt and concentrated salt Chemical and oil processes equipment. | |
| | Nickel201 | | | |
| | Ni-alloy | | | |
| | Monel 400 | Superior corrosion resistance under reducing environment, and stress corrosion cracking resistance. | Chemical processes handling alkali chloride and boiled acid, also for oil refining. | |
| | Monel K500 | | | |
| | Inconel 600 | Superior corrosion resistance to pure water and alkali under oxidizing and high temperature environment; also resistance to stress corrosion cracking by Cl ions. | Chemical and food processes. | |
| | Inconel 625 | Superior corrosion resistance under oxidizing and high temperature environment; and superior erosion resistance. | Chemical processes in general. | |
| | Incoloy 800 | Superior mechanical strength at high temperature and resistance to carburizing with stabilized structure to be used for long duration; also superior corrosion resistance under humid environment. | Petrochemical and carburizing processes. | |
| | Incoloy 800H | | | |
| | Incoloy 825 | Superior corrosion resistance to sulfuric acid and phosphoric acid; also resistance to stress corrosion cracking and crevice corrosion. | Chemical processes in general. | |
| | Hastelloy B | Resistance to hydrochloric acid of any concentration up to boiling point, resistance to reducing chloride such as sulfuric acid, phosphoric acid and copper chloride, resistant to high temperature but not suitable under highly oxidizing environment. | Corrosion resistance processes handling chlorine, sulfuric acid, phosphoric acid, acetic acid and hydrogen chloride gas, also for processes handling chloridewith high concentration at high temperature. | |
| | Hastelloy B-2 | | | |
| | Hastelloy C276 | Superior resistance under oxidizing environment, such as wet chlorine gas and chlorine dioxide; also resistance to organic and chloride such as acetic acid and seawater. | Processes handling oxidizing acid, formic acid, acetic anhydride and seawater, also for chemical processes handling fluoride. | |
| | Hastelloy C-22 | | | |
| | Hastelloy C-4 | Higher intergranular corrosion resistance than HastelloyB. | Acetic acid, chemical manure, agricultural pesticide processes. | |
| | Hastelloy G | Superior corrosion resistance to mixed acid of phosphoric acid and oxidizing acid. | Processes handling sulfuric acid and phosphoric acid. | |
| | Hastelloy G30 | | | |
| | Zirconium | Zirconium702 | High resistance to pitting, crevice corrosion resistance, High resistance to stress corrosion cracking, corrosion fatigue and erosion. Good in nearly all cases, excellent for high temperature acids. | Nuclear cooling processes, chlorhydric acid, dilute sulphuric acid and alkali processes equipment. |
| | | Zirconium705 | | |
| Iron base alloy | Duplex stainless steel | | | |
| | Duplex S31803 | High cracking corrosion resistance to chloride environment, high corrosion resistance to dilute sulphuric acid and phosphoric acid. | Pulp and paper mills, chemical processes, and seawater service. | |
| | Super-Duplex S32750 | Higher stress corrosion cracking resistance than austenitic stainless steel, Higher weldability than ferritic stainless steel and higher acid, pitting and crevice corrosion resistance than CF3M with higher mechanical strength. | Salt manufacturing processes, seawater desalination, and seawater service under chloride environment and dilute sulfuric acid, phosphoric acid formic acid acetic acid and urea production under acid environment also for chemical processes. | |
| | Super-Duplex S32760 | | | |
| | Super austenitic stainless steel | | | |
| | 904L | The most superior acid and alkali resistance among all austenitic stainless steel and superior pitting and crevice corrosion resistance to chloride solution as seawater. | Chemical processes for highly concentrated chloride, flue gas desulfurization, acid and alkali reactor, salt manufacturing processes and seawater desalination. | |
| | 254SMO | | | |
| | AL-6XN | | | |
| | Alloy 20 | Superior corrosion resistance to nitric acid of any concentration at 60°C and lower, and to heated dilute oxide. | Chemical processes handling acetic acid alkali, dilute hydrochloric acid, dilute hydrofluoric acid, dilute sulphuric acid and phosphoric acid, also for oil refining. | |
| | Austenitic stainless steel | | | |
| | 304 | Super corrosion resistance to nitric acid phosphoric acid and organic acid. | Pulp and paper mills, chemical processes, and seawater service. | |
| | 304L | Higher intergranular corrosion resistance than CF8. | | |
| | 316 | Higher pitting corrosion resistance than CF8. | | |
| | 316L | Higher intergranular corrosion resistance than CF8M. | | |
| | 316Ti | Higher intergranular corrosion resistance than CF3M with T. | Power generation, seawater service and oil pipeline. | |
| | 317 | Higher pitting and crevice corrosion resistance than CF8. | | |
| | 317L | | | |
| 347 | Higher intergranular corrosion resistance than CF8M, carbide stabilized with Nb. | Pulp and paper mills, chemical processes, and seawater service. | | |
| 310 | Sulfurous acid and dilute sulphuric acid with Higher Cr Ni content. | Chemical processes. | | |
| 310S | | | | |
| Copper | Copper alloy | | | |
| | B148 C95800 | Specialized anti-corrosive applications. | General sea water-related service. | |

BALL VALVES

Design standard: API, ASME, EN, ISO, JIS, DIN, BS, GB
 Connecting type: Flanged, Wafer, SW, BW, Thread type, etc.
 Pressure rating: Class 150 LB~2500 LB, 1.0 MPa~42.0 MPa, JIS10K~40K
 Size range: NPS3/8"~48", DN8~DN1200
 Operation: Lever, Gear

Design Feature:

- 2pc-3pc
- Soft sealing / Metal sealing
- Full bore / Reduce bore
- Fire-safe design, Anti-static, Blow-out proof stem
- Anti - leakage design packing & packing box
- Stem&seat grease feeding system
- Cavity pressure automatic relief structure
- Double block and bleed (DBB) function
- ISO 5211 mounting pad
- Optional locking device

GATE VALVES

Design standard: API, ASME, EN, ISO, JIS, DIN, BS, GB
 Connecting type: Flanged, SW, BW, Thread type, etc.
 Pressure rating: Class 150 LB~2500 LB, PN1.0 MPa~42.0 MPa, JIS10K~40K
 Size range: NPS1/2"~60", DN15~DN1500
 Operation: Hand wheel, Gear

Design Feature:

- Flexible / Solid wedge disc
- Full bore / Reduce bore
- Bolted bonnet / Pressure seal
- Renewable seat / Integral seat



2-PC ball valve



3-PC ball valve



Metal seated ball valve



API 602 gate valve



API 600 gate valve



Duplex gate valve



Floating ball valve



C95800 ball valve



High temp ball valve



Pressure seal gate valve



904L gate valve



Titanium gate valve



Zirconium ball valve



Trunnion ball valve



Jacketed ball valve



Titanium knife gate valve



Ni-Al-Br C95800 gate valve



Large size gate valve

GLOBE VALVES

Design standard: API, ASME, EN, ISO, JIS, DIN, BS, GB
 Connecting type: Flanged, SW, BW, Thread type, etc.
 Pressure rating: Class150 LB~2500 LB, PN1.0 MPa~42.0 MPa, JIS10K~40K
 Size range: NPS3/8" ~16", DN8~DN400
 Operation: Hand wheel, Gear

Design Feature:

- Full bore / Reduce bore
- Bolted bonnet / Pressure seal
- Integral seat
- Conical sealing surface / Flat sealing surface

CHECK VALVES

Design standard: API, ASME, EN, ISO, JIS, DIN, BS, GB
 Connecting type: Flanged, Wafer, Lug, SW, BW, Thread type, etc.
 Pressure rating: Class150 LB~2500 LB, PN1.0 MPa~42.0 MPa, JIS10K~40K
 Size range: NPS1/2" ~60", DN15~DN1500

Design Feature:

- Lift / Swing / Dual plate / Vertical type
- Full bore / Reduced bore
- Bolted bonnet / Pressure seal
- Renewable seat / Integral seat



Pressure seal globe valve



ASME globe valve



Zirconium globe valve



Lift check valve



Dual plate check valve



Titanium dual plate check valve



Y pattern globe valve



DIN globe valve



Ni-Al-Br C95800 globe valve



904L vertical check valve



C95800 nozzle check valve



Pressure seal check valve



Large size globe valve



Monel globe valve



904L globe valve



Zirconium swing check valve



Titanium swing check valve



Hastelloy swing check valve

PLUG VALVES

Design standard: API, ASME, EN, ISO, JIS, DIN, BS, GB
 Connecting type: Flanged, SW, BW, Thread type, etc.
 Pressure rating: Class 150 LB~600 LB, PN1.0 MPa~10.0 MPa, JIS10 K-40 K
 Size range: NPS 1/2" ~24", DN15~DN600
 Operation: Lever, Gear

Design Feature:

- Full bore/reduce bore
- Soft sealing/metal sealing
- Packing box structure
- Anti erosion adjustable structure
- 2-Way/ 3-Way
- Double gland seal
- Trunnion design

BUTTERFLY VALVES

Design standard: API, ASME, EN, ISO, JIS, DIN, BS, GB
 Connecting type: Flanged, Wafer, Lug, BW type, etc.
 Pressure rating: Class 150 LB~600 LB, PN1.0 MPa~10.0 MPa, JIS10K~40K
 Size range: NPS 2" ~100", DN50~DN2500
 Operation: Lever, Gear

Design Feature:

- Double offset/Triple offset
- Zero leakage
- Uni-directional or Bi-directional seal
- Soft or metal seated
- Blow-out proof stem
- ISO 5211 mounting pad



Metal sealing plug valve



Double gland plug valve



Zirconium plug valve



Large size butterfly valve



Double offset butterfly valve



Wafer type butterfly valve



Piston plug valve



Lockable plug valve



Hastelloy sample valve



C95800 butterfly valve



Hastelloy butterfly valve



Flanged type butterfly valve



904L plug valve



Titanium plug valve



Trunnion plug valve



Triple offset butterfly valve



Alloy 20 butterfly valve



Lug type butterfly valve

CONTROL VALVES

- Type: Linear (Globe, Gate) or Rotary (Ball, Plug, Butterfly), Special control valve
- Operation: Electric, pneumatic, hydraulic, electro-hydraulic, electro-pneumatic
- Size Range: NPS 1/2"~24"
- Pressure rating: 150 LB~ 900 LB
- Connection type: Flanged, Wafer



OTHERS



Ball type discharge valve



Jacketed discharge valve



Open upward discharge valve



Titanium globe control valve



Special control valve



Titanium V-ball control valve



Hastelloy discharge valve



Open downward discharge valve



Needle valve



Duplex plug control valve



904L plug control valve



3-Way control valve



Pure nickel strainer



Duplex Y strainer



Titanium basket strainer



Titanium butterfly control valve



Zirconium ball control valve



Discharge control valve



Titanium ball



Titanium stem



Flange

Engineering Data—Soft Seat Material

Seat

| Properties | | Nylon | Teflon (unfilled) | PEEK | Delrin | Polyphenylene |
|----------------------|------------------------|---|------------------------------|---|---|---|
| Temperature Range °F | | -30~250 | -100~425 | -60~500 | -50~200 | -50~450 |
| Pressure Rating | | 900~1500 | 150~600 | 150~1500 | 150~1500 | 150~300 |
| Mechanical Property | Hardness | D75 | D58 | D85 | R-120 | D80 |
| | Tensile Strength (psi) | 8700(min) | 2100~2400 | 11000(min) | 6600~7500 (min) | 2000~2350 (min) |
| | Elongation (%) | 250~290 | 250 | 30(min) | 220 | 275~310 |
| Physical Property | Specific Gravity | 1.04 | 2.2 | 1.3 | 1.41 | 1.9~2.1 |
| | Water Absorption (%) | 0.2 | <0.01 | 0.18 | 0.15 | 0.1~0.2 |
| | Radiation | 5*10 ⁸ RAD | 10 ⁴ RAD | 10 ⁹ RAD | 107RAD | 9*10 ⁶ RAD |
| Service Application | | High pressure & Low temperature service | Chemical & Cryogenic service | High pressure & temperature service with steam in radiation environment | High pressure & Low temperature service | High temperature High Corrosion service |

Sealing

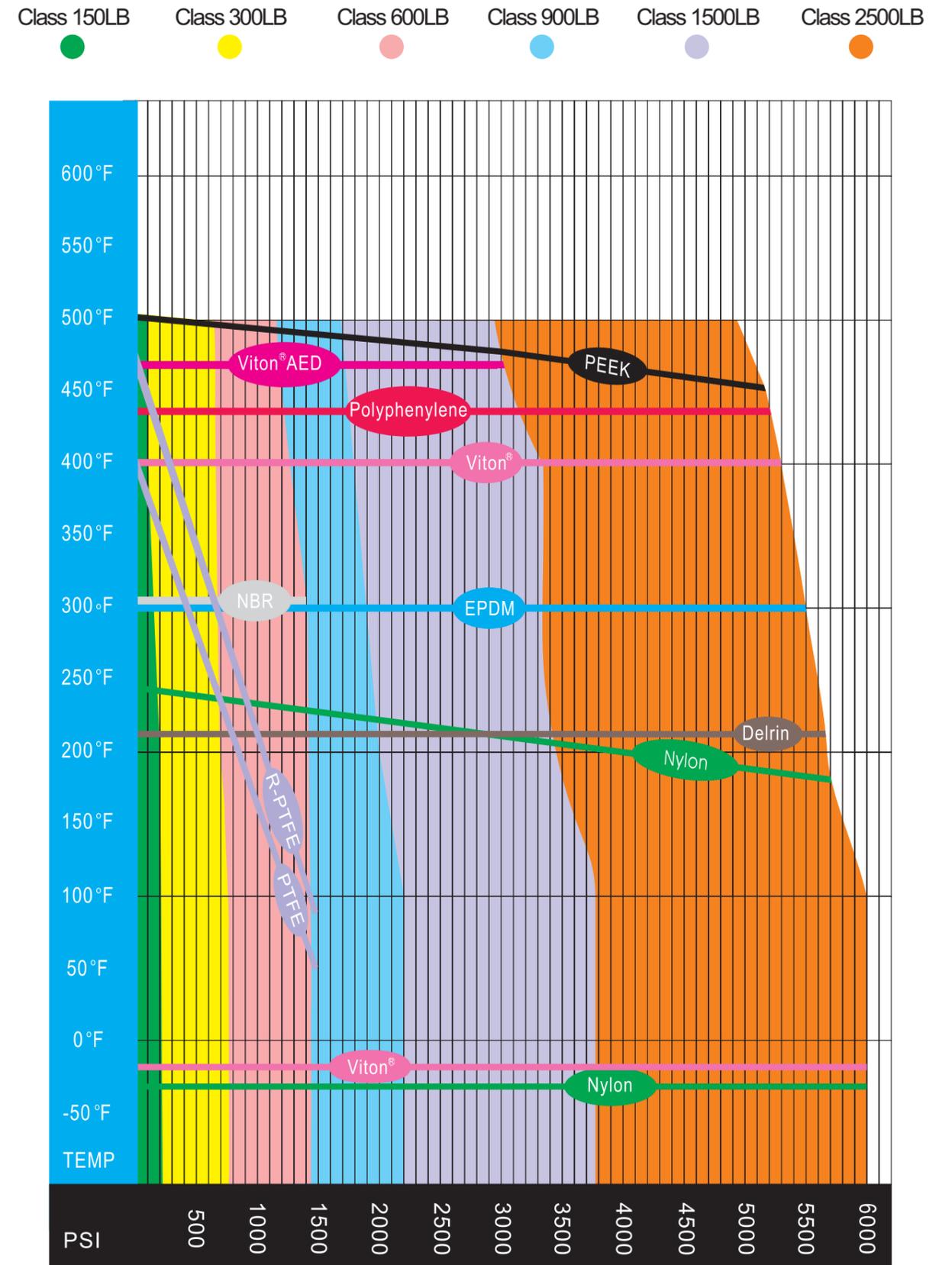
| Type | Viton® | EPDM | 25% Glass Filled PTFE | NBR | Buna.N |
|----------------------|---------|---------|-----------------------|---------|---------|
| Temperature range °F | -20~400 | -60~300 | -328~1000 | -50~300 | -30~250 |
| Service Application | 1.85 | --- | 2.24 | 1.2 | 1.31 |
| Hardness | D75 | D90 | D65 | D50 | D90 |

Gasket

| Type | Flexible Graphite | Spiral Wound Metal+Graphite | Spiral Wound Metal+PTFE |
|----------------------|-------------------|-----------------------------|--------------------------|
| Temperature range °F | -328~1000 | -328~1000 | -328~500 |
| Service Application | 100% Fire-safe | 100% Fire-safe | Cryogenic High Corrosion |
| Hardness | 0~14 | 0~14 | 0~14 |

Contact Weidouli for optional requirement of gasket or gland packing other than listed above.

Engineering Data—Pressure Temperature Chart



This chart is just for reference.