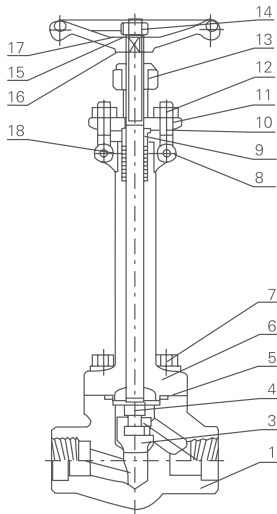


# Forged Steel cryogenic Valves

## Cryogenic gate valves



### Application specifications

- 1、 Design and manufacture conform to API602 BS5352 B16.34
- 2、 Connection ends conform to
  - 1)Socket welded ends conform to ANSI B16.11;JB/T1751
  - 2)Screw ends conform to ANSI B1.20.1;JB/T7306
  - 3)Butt-welded ends conform to ANSI B16.25;JB/T12224
  - 4)Flanged ends conform to ANSI B16.5;JB79
- 3、 Valve test and inspection conform to:API 598; GB/T13927; JB/T9092
- 4、 Structure features:Bolted bonnet,outside screw and yoke Welded bonnet,outside screw and yoke
- 5、 Materials conform to ANSI/ASTM
- 6、 Main materials:LF2; LF3; 304(L); 316(L); F347; F321; F51; Monel; 20 Alloy.

### Carbon steel temperature–pressure rate

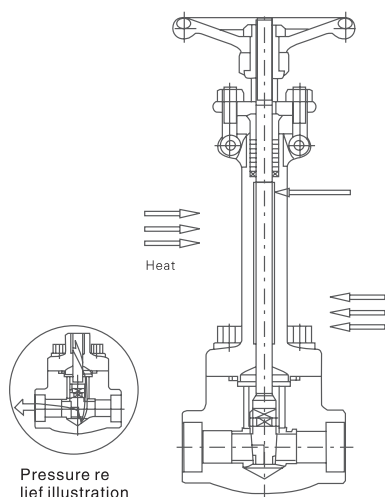
CL150–285P.S.I@100° F	CL300–740P.S.I@100° F	CL600–1480P.S.I@100° F
CL800–1975P.S.I@100° F	CL1500–3705P.S.I@100° F	

### Main part materials list

NO	Part name	A105/F6a	A105/F6aHFS	LF2/304	LF3/304	F304(L)/304(L)	F316(L)/316(L)	F51/F51
1	Body	–	–	LF2	LF3	F304(L)	F316(L)	F51
2	Seat ring	–	–	304	304	304(L)	316(L)	F51
3	Wedge disc	–	–	F304	F304	F304(L)	F316(L)	F51
4	Stem	–	–	304	304	304(L)	316(L)	F51
5	Gasket	–	–	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite
6	Bonnet	–	–	LF2	LF3	F304(L)	F316(L)	F51
7	Bolt	–	–	L7	L7	B8	B8	B8
8	Pin	–	–	410	410	304	304	304
9	Gland	–	–	304	304	304	316	F51
10	Gland eyebolt	–	–	L7	L7	B8(M)	B8(M)	B8M
11	Gland flange	–	–	LF2	LF3	F304	F304	F304
12	Hex nut	–	–	2H	2H	8(M)	8(M)	8M
13	Stem nut	–	–	410	410	410	410	410
14	Locking nut	–	–	35	35	35	35	35
15	Nameplate	–	–	AL	AL	AL	AL	AL
16	Handwheel	–	–	A197	A197	A197	A197	A197
17	Lubricating gasket	–	–	410	410	410	410	410
18	Packing	–	–	Graphite	Graphite	Graphite	Graphite	Graphite

# Forged Steel cryogenic Valves

## Cryogenic gate valves



## Product application

BANG TAI has many users in cryogenic valves. through more than 20-year continuous efforts, BANG TAI forged cryogenic gate, globe and check valves are specially designed to handle the technical problems that arise in the production, transport and storage of liquified gases such as oxygen, nitrogen, argon, natural gas, hydrogen or helium (down to  $-425F/-254C$ ). BANG TAI specially adapted extended bonnet forged valves offer safe and efficient service.

## Design features

All basic design features of BANG TAI forged steel valves outlined in this catalog are adapted to special service conditions at cryogenic temperatures.

Extended bonnets with sufficient gas column length, usually specified by customer, are supplied for all valves to keep stem packing at sufficient distance away from the cold fluid to remain functional.

Pressure releasing Hole, designed in the wedge, warrants the pressure in body chamber to be balance, even if the pressure inside the body chamber is suddenly up.

High-hard-surfaced stem hardened with nitriding remains its perfect bruise and corrosion resistance at the extreme low temperature, so as to prevent the packing from being damaged.

Overlaid Stellite 6 closure members on 1/2~2" (150mm) valves operate with no galling in cryogenic service.

## Cryogenic test

Purpose: Demonstrating the perfect operating performances in model cryogenic conditions

Environment: Inside a device full of liquified Nitrogen, temperature smaller than  $196^{\circ}C$ .

Procedures: After being verified at room temperature, the valve is cleaned and dried, when the temperature reached the required one, it can begin to test.

Operating performance test in cryogenic conditions

Sealing performance tests for packing and gasket

Sealing performance test for backseat.

# Forged Steel cryogenic Valves

## Cryogenic gate valves

### Application specifications

- 1、 Design and manufacture conform to API602 BS5352 B16.34
- 2、 Connection ends conform to
  - 1)Socket welded ends conform to ANSI B16.11;JB/T1751
  - 2)Screw ends conform to ANSI B1.20.1;JB/T7306
  - 3)Butt-welded ends conform to ANSI B16.25;JB/T12224
  - 4)Flanged ends conform to ANSI B16.5;JB79
- 3、 Test and inspection conform to:API 598; GB/T13927; JB/T9092
- 4、 Structure features:Bolted bonnet,outside screw and yoke Welded bonnet,outside screw and yoke
- 5、 Materials conform to ANSI/ASTM
- 6、 Main materials:LF2; LF3; 304(L); 316(L); F347; F321; F51

### Carbon steel temperature-pressure rate

CL150-285P.S.I@100° F	CL300-740P.S.I@100° F	CL600-1480P.S.I@100° F
CL800-1975P.S.I@100° F	CL1500-3705P.S.I@100° F	

### Main part materials list

NO	Part name	A105/F6a	A105/F6aHFS	LF2/304	F3/304	F304(L)/304(L)	F316(L)/316(L)	F51/F51
1	Body	-	-	LF2	LF3	F304(L)	F316(L)	F51
2	Seat ring	-	-	304	304	304(L)	316(L)	F51
3	Wedge disc	-	-	F304	F304	F304(L)	F316(L)	F51
4	Stem	-	-	304	304	304(L)	316(L)	F51
5	Gasket	-	-	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite
6	Bonnel	-	-	LF2	LF3	F304(L)	F316(L)	F51
7	Bolt	-	-	L7	L7	B8	B8	B8
8	Pin	-	-	410	410	304	304	304
9	Gland	-	-	304	304	304	316	F51
10	Gland eyebolt	-	-	L7	L7	B8(M)	B8(M)	B8M
11	Gland flange	-	-	LF2	LF3	F304	F304	F304
12	Hex nut	-	-	2H	2H	8(M)	8(M)	8M
13	Stem nut	-	-	410	410	410	410	410
14	Locking nut	-	-	35	35	35	35	35
15	Nameplate	-	-	AL	AL	AL	AL	AL
16	Handwheel	-	-	A197	A197	A197	A197	A197
17	Lubricating gasket	-	-	410	410	410	410	410
18	Packing	-	-	Graphite	Graphite	Graphite	Graphite	Graphite

