

**TANA**  
TOPNOTCH MACHINE CO.,LTD.

API Plug  
 **Valve** Series  
& API Y Strainer Series



■ **Product structural features**

Inverted pressure balance bricated plug valve acc. to ANSI is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum, chemical industry, pharmacy, chemical fertlizer, electric power industry etc under nominal pressure of CLASS150-1500LBS and working temperature of-29-180℃。

■ **Main structural features**

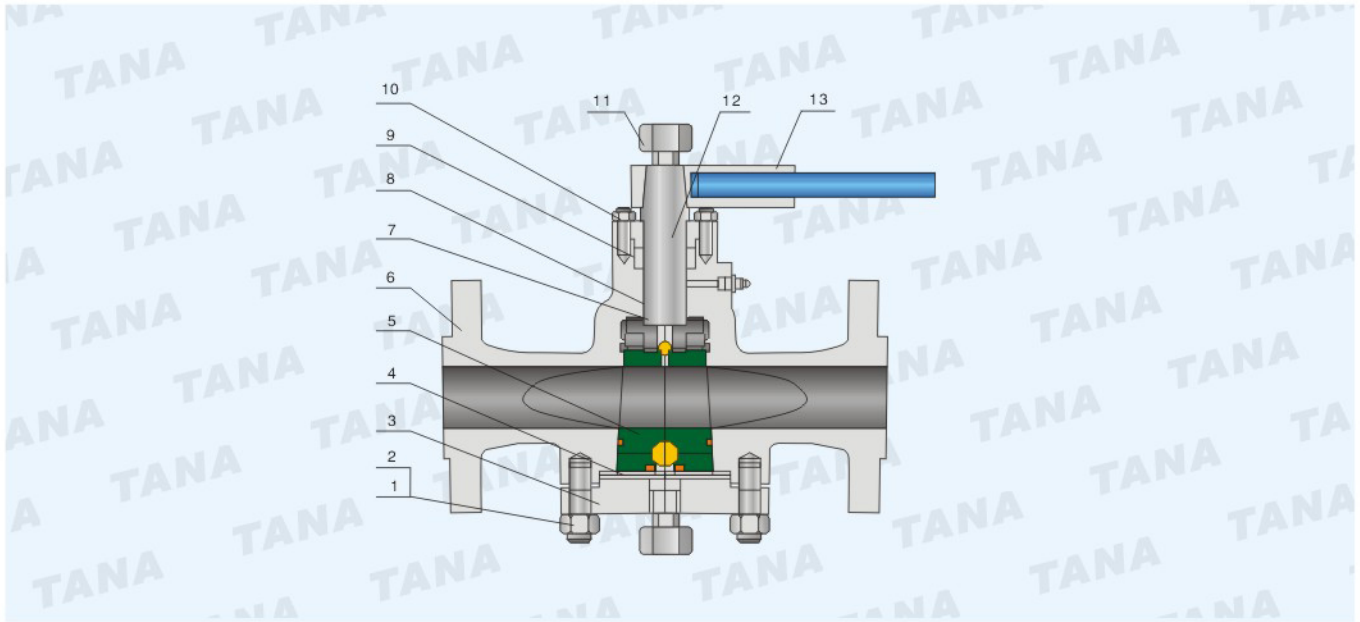
- 1、 It has logical structure, reliable seal, excellent performance and nice design.
- 2、 It has the structure of flip-chip balanceable pressure and light on/off operation.
- 3、 An oil groove is set between valve body and seal surface,which may infuse the seal grease to increase the seal capability.
- 4、 The part material and flange dimension may be selected according to current operating condition and users requirement, so that meet the Requirements of various engineering.

■ **Technical specifiction**

Structural formation	BC
Driving maner	Hand-operated
	Electric-actuated
Design standard	API 599.API 6D
Face to face	ASME B 16.10
Flange ends	ASME B 16.5
Test & inspection	API 598.API 6D

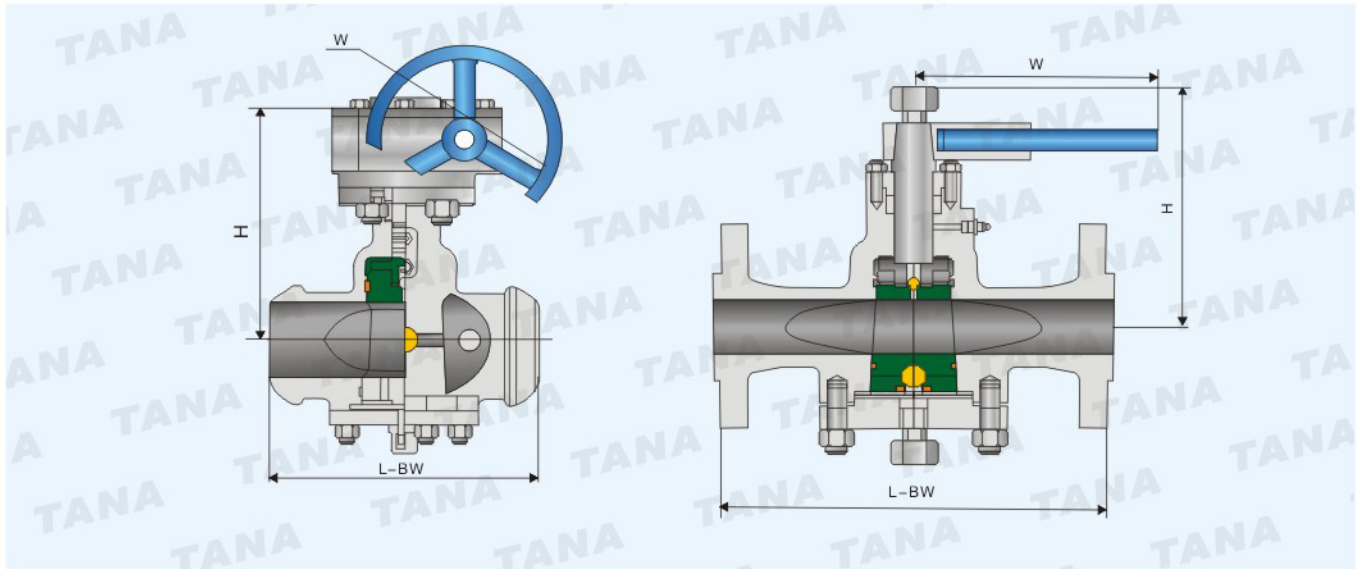
■ **Products performance specification**

Nominal pressure (LB)	Shell test(MPa)	Sealing test(NP)	Suitable temp.(℃)	Suitable medium(℃)
150	3.0	2.2	≤ 180℃	Water oil & gas
300	7.5	5.5		
600	15.0	11.0		
900	22.5	16.5		



■ Main parts materials

NO	Partname	Material
1	Bolt	ASTM A193-B7, A19.-BB, A193-BBM
2	Nut	ASTM A194-2H, A194-8, A194-8M
3	Cover	ASTM A216-WCB ASTM A351-CF8, CF8M, CF3, CF3M
4	Gasket	Flexible graphite+stainless steel, PTFE
5	Plug	ASTM A182-Gr.F6a ASTM A182-F22 ASTM A351-CF8 Cr5M CF3CF3M
6	Body	ASTM A216-WCB ASTM A351-CF8, CF8M, CF3, CF3M
7	Stem	ASTM A182-Gr.F6a ASTM A182-F22 ASTM A182-F304, F316, F312, F304L, F316L
8	O-ring	NBR
9	Packing	Flexible graphite, PTFE
10	Gland	ASTM A216-WCB ASTM A351-CF8, CFB8M, CF3, CF3M
11	Oilnozzle	B62
12	Check valve	F6a, F304, F304L, F316, F316L
13	Wrench	ASTM A47-32510, A216 WCB

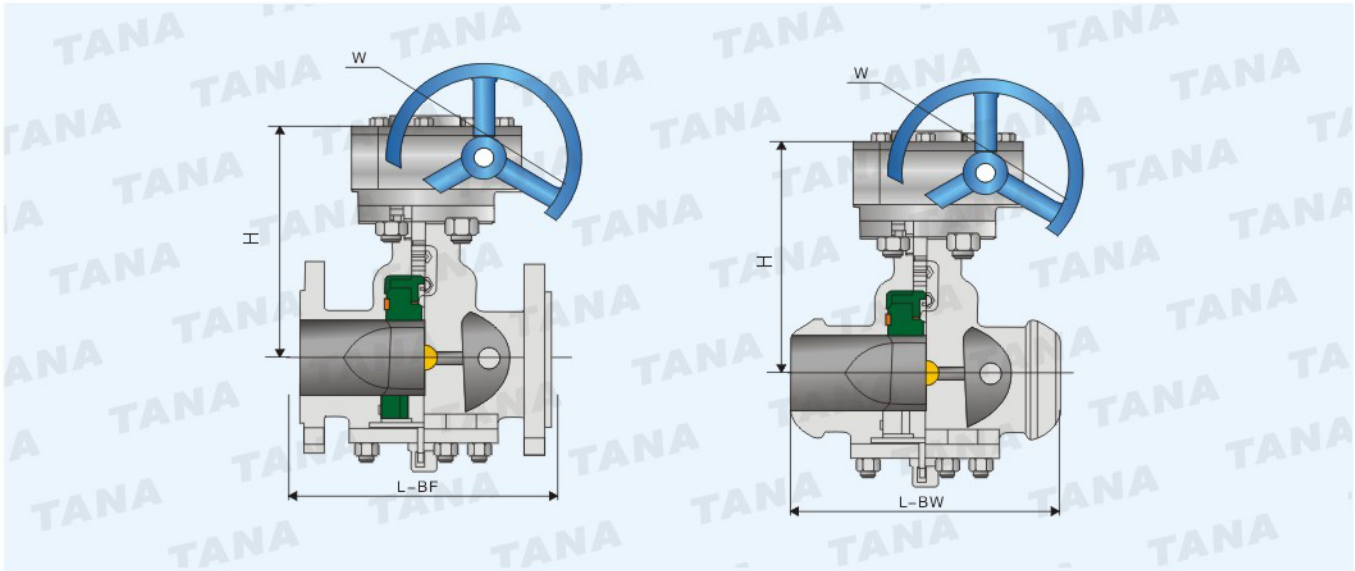


Model		X47F-150Lb														
Pressure		150Lb														
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		108	117	127	140	165	178	190	203	229	245	267	292	330	356	686
L-BW		152	178	203	216	229	267	305	330	356	381	457	521	559	635	686
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	500	600	600	820	820	300	300	320	320	350	380	380
Weight(Kg)		10	12	14	17	19	21	29	33	48	75	98	125	171	230	370

4" or above with worm gear

Model		X47F-300Lb														
Pressure		300Lb														
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
L-BW		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	600	600	820	1000	1000	300	300	320	320	350	380	380
Weight(Kg)		12	14	16	19	21	24	31	36	61	86	130	190	255	380	560

4" or above with worm gear



Model		X47F-600Lb														
Pressure		600Lb														
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF · BW		165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	500	600	820	1000	1000	300	300	320	320	350	380	380
Weight(Kg)		14	16	18	20	24	29	35	47	91	129	210	320	660	920	1250

4" or above with worm gear

Model		X47F-900Lb														
Pressure		900Lb														
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF · BW		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	600	600	820	1000	1000	300	300	320	320	350	380	380
Weight(Kg)		17	29	21	24	30	37	44	65	110	160	255	380	810	1050	1460

4" or above with worm gear

### ■ Product structural features

Sleeve type soft sealing plug valve acc.to ANSL is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum, chemical industry, pharmacy, chemical fertilizer, power industry etc under nominal pressure of CLASS 150-900Lbs, and working temperature of -29~180°C.

### ■ Main structural features

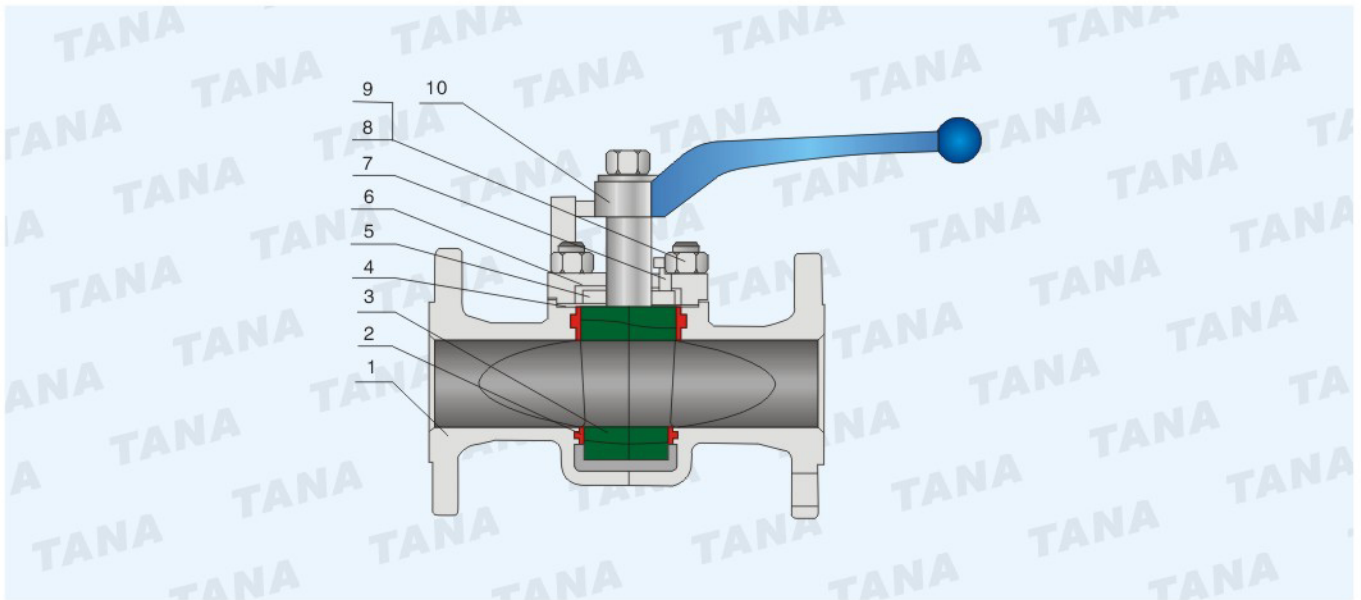
- 1、 The product has reasonable structure, reliable sealing, excellent performance and beautiful appearance.
- 2、 Its sealing is realized by the sealing face around the sleeve. It has unique 360 degree metal edge for protection and fixing of the sleeve.
- 3、 There is no cavity in the valve for accumulation of medium.
- 4、 Metal edge provides the function of self-cleaning when the plug is rotated, applicable to the operation condition that is glutinous and apt to smudge.
- 5、 Its characteristic double-direction flow makes installation and use more convenient.
- 6、 The materials of the parts and sizes of flanges can be reasonably configured according the actual operation condition of the requirements of the Customers, so as to meet the various needs of engineering.

### ■ Technical specification

Structural formation	BC
Driving maner	Wrench wheel, worm & worm gear, pneumatic, electric-actuated
Desgn standard	API 599, API 6D
Face to face	ASME B16.10
Flange ends	ASME B16.5
Test & inspection	API 598, API 6D

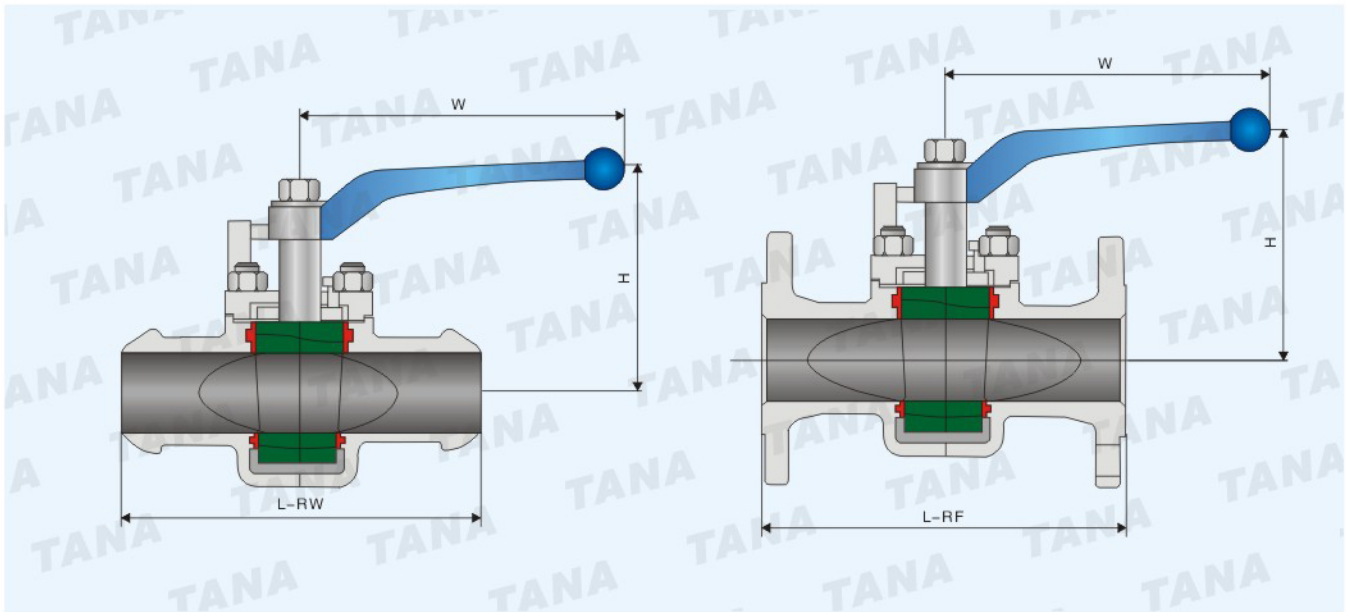
### ■ Products performance specification

Nominal pressure	Shell test(MPa)	Sealing test(NPa)	Suitable temp.	Suitable medium
150	3.0	2.2	≤ 180°C	Water oil & gas
300	7.5	5.5		
600	15.0	11.0		
900	22.5	16.5		



■ Main parts materials

NO.	Partname	Material
1	Body	ASTM A216 WCB ASTM A351-CF8, CF8M, CF3M
2	Sleeve	PTEF
3	Plug	ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF3, CF3M
4	Gasket	Flexible graphite+Stainless steel、PTFE
5	Adjusting gasket	ASTM A182-Gr.F6a ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316
6	Cover	ASTM A216-WCB ASTM A351-CF8, CF8M, CF3,CF3M
7	Adjusting bolt	ASTM A193-B7, A193-B8, A193-B8M
8	Nut	ASTM A194-2H, A194-8, A194-8M
9	Bolt	ASTM A193-B7, A193-B8, A193-B8M
10	Wrench	ASTM A216-WCB



Model		X43F-150Lb														
Pressure		150Lb														
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	1 1/2	3	4	5	6	8	10	12	14
L-RF		108	117	127	140	165	178	190	203	229	254	267	292	330	356	381
L-BW		152	178	203	216	229	267	305	330	356	381	394	457	559	635	686
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
Weight(Kg)		8.5	9.5	10.5	12	14	18	22	26	40	60	70	130	219	381	570

4" or above with worm gear

Model		X43F-300Lb														
Pressure		300Lb														
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		140	152	165	178	190	216	241	282	305	381	403	419	457	502	762
L-BW		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
Weight(Kg)		9.5	10.5	12	14	16	20	24	29	53	75	85	185	230	390	550

4" or above with worm gear



## Product structural features

3-way, 4-way plug valve is applicable to change the media flowing direction or to distribute the media, that are used in various industries such as petroleum chemical industry, pharmacy, chemical fertilizer, power industry etc under nominal pressure class 150-900LBS, PN1.6-16MPa, working temperature of -29-550°C.

## Main structural features

1. The product has reasonable structure, reliable sealing, excellent performance and beautiful appearance.
2. According to different conditions, the 3-way, 4-way plug valve can be designed into diverseful media flowing forms(eg."L" type or "T" type) or all kinds of materials (eg.Iron, cast steel, stainless steel) or unlike sealing forms (eg.Metal to metal, sleeve Type, lubricated, ect)
3. The materials of the parts and sizes of flanges can be reasonably configured according the actual operation condition of the requirements of the customers, so as to meet the various needs of engineering.

## Technical specification

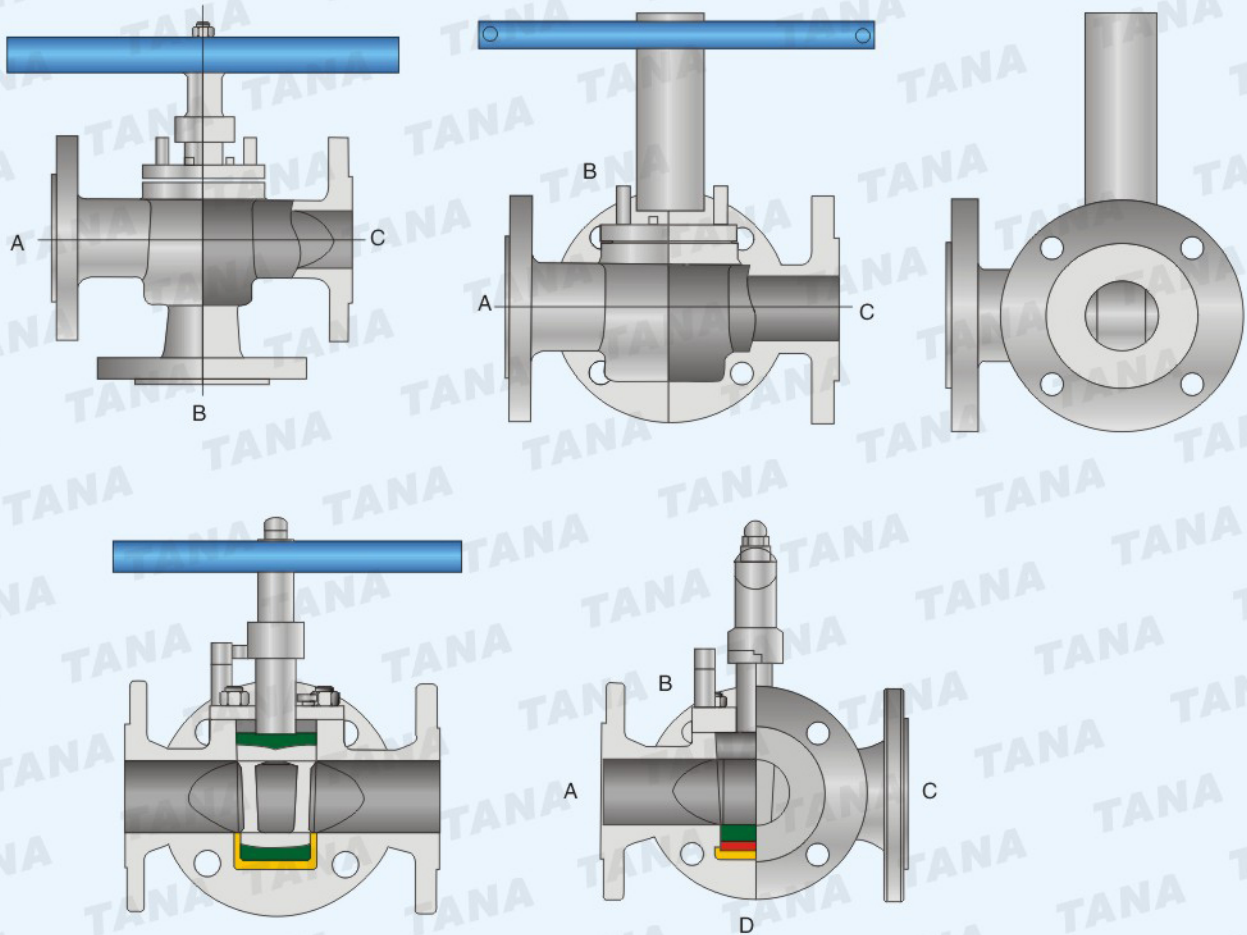
Structural formation	BB-BC
Driving manner	Wrench wheel, worm & worm gear, pneumatic, electric-actuated
Design standard	API 599, API 6D
Face to face	ASME B16.10, GB12221, DIN3202
Flange ends	ASME B16.5, JB79, GB9113, DIN2543-2545
Test & inspection	API 598, API 6D, GB13927, DIN3230

## Products performance specification

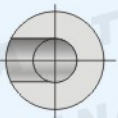
Nominal pressure	Shell test	Sealing test
150	3.0	2.2
300	7.5	5.5
600	15.0	11.0
900	22.5	16.5

Nominal pressure	Shell test	Sealing test
1.6	2.4	1.76
2.5	3.75	2.75
4.0	6.0	4.4
6.4	9.6	7.04
10.0	15.0	11.0
16.0	24.0	17.6

Bore forms & media flowing forms for 3-way, 4-way plug valve



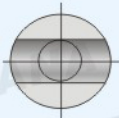
Plug structure(1)



Media flowing forms

- ① a→b ② b→c
- ③ Fully closed

Plug structure(2)



Media flowing forms

- ① A→B→C
- ② Fully closed

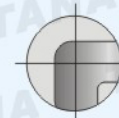
Plug structure(3)



Media flowing forms

- ① A→B ② B→C
- ③ Fully closed

Plug structure(4)



Media flowing forms

- ① A→B ② B→C
- ③ Fully closed

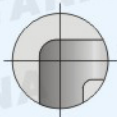
Plug structure(5)



Media flowing forms

- ① A→B→C ② A→B
- ③ B→C A→C

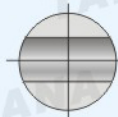
Plug structure(6)



Media flowing forms

- ① A→B ② B→C
- ③ C→D ④ D→A

Plug structure(7)



Media flowing forms

- ① A→B ② B→D

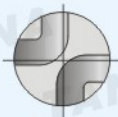
Plug structure(8)



Media flowing forms

- ① A→B→C ② B→C→D
- ③ A→C→D ④ A→B→D

Plug structure(9)



Media flowing forms

- ① A→B→C→D
- ② A→D B→C
- ③ Fully closed