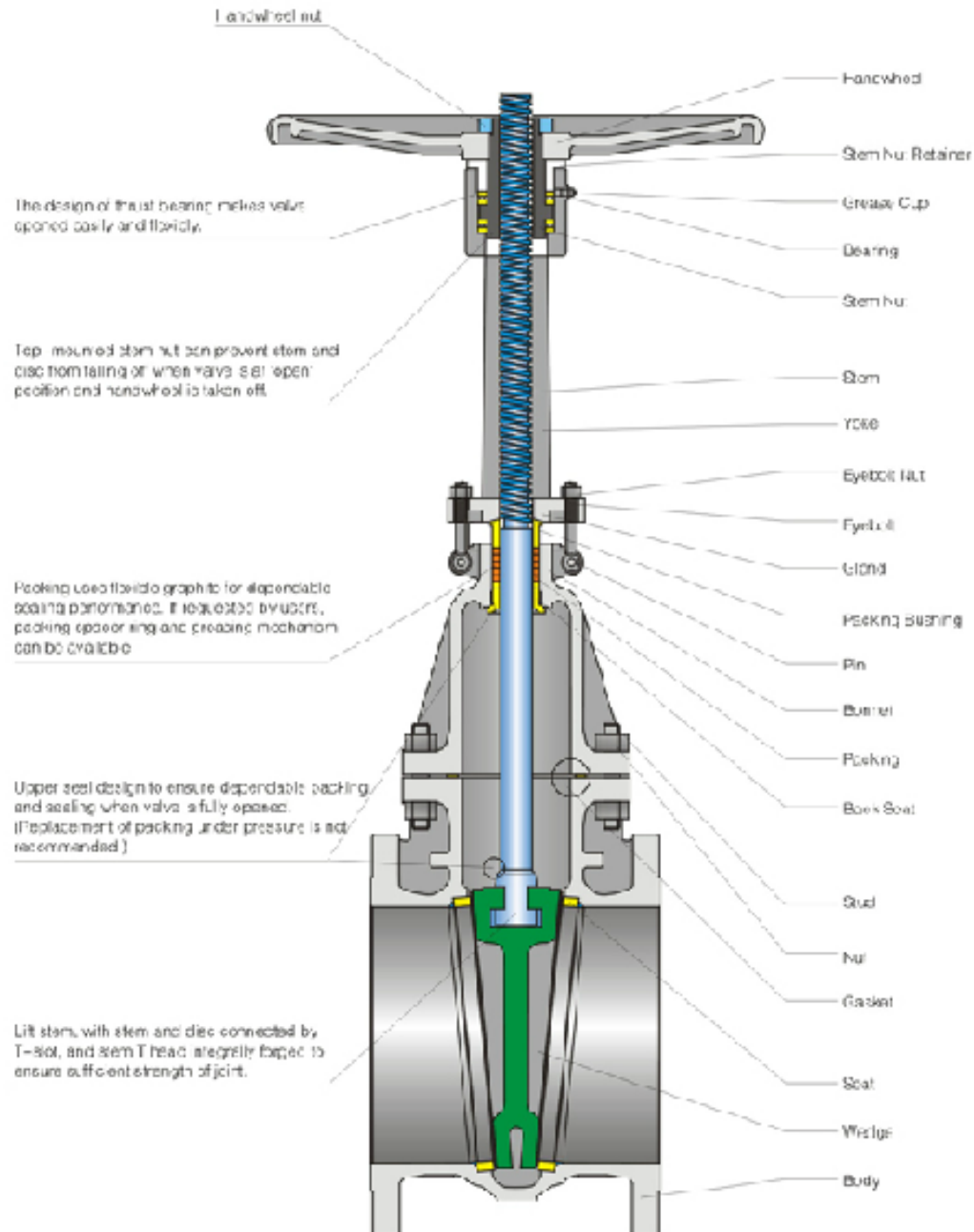


Design of Cast Steel Gate Valve With Rising Stem(OG & V)



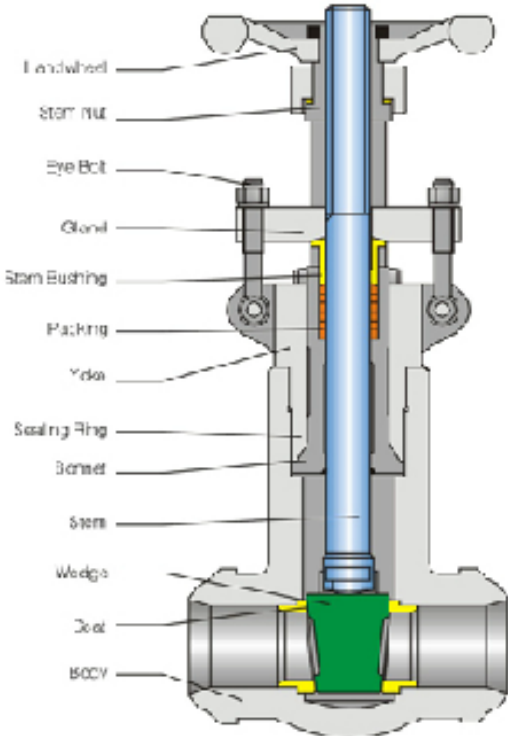
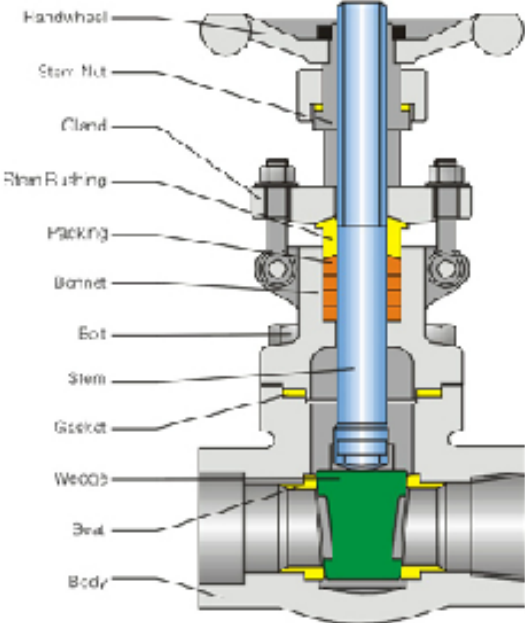
Materials list for API600 Cast Steel Gate Valve with Rising Stem(OS&Y)

No.	Part Name	Carbon Steel	Stainless Steel	Alloy Steel	Low Temperature Steel
1	Body	ASTM A216 GR WCB	ASTM A351 GF CF8	ASTM A217 GR WCB	ASTM A352 GR LCB
2	Wedge	ASTM A216 GR WCB	ASTM A351 GF CF8	ASTM A217 GR WCB	ASTM A352 GR LCB
3	Seat	ASTM A102	-	ASTM A182 GR F304	ASTM A182 GR F304
4	Gasket	Soft Graphite +9904			
5	Nut	ASTM A194 GR B8	ASTM A193 GR B8	ASTM A194 GR 4	ASTM A194 GR B8
6	Stud	ASTM A193 GR B7	ASTM A193 GR B8	ASTM A193 GR B7	ASTM A193 GR B8
7	Back Seat	ASTM A182 GR F6a	ASTM A182 GR F304	ASTM A182 GR F304	ASTM A182 GR F304
8	Packing	Soft Graphite			
9	Band	ASTM A216 GR WCB	ASTM A351 GF CF8	ASTM A217 GR WCB	ASTM A352 GR LCB
10	Pin	ASTM A194 GR B8	ASTM A276 TYPE 304	ASTM A276 TYPE 410	ASTM A276 TYPE 304
11	Shielding Bushing	ASTM A182 GR F6a	ASTM A182 GR F304	ASTM A182 GR F6a	ASTM A182 GR F304
12	Gland	ASTM A216 GR WCB	ASTM A351 GF CF8	ASTM A216 GR WCB	ASTM A352 GR LCB
13	Eyebolt	ASTM A193 GR B7	ASTM A193 GR B8	ASTM A193 GR B7	ASTM A194 GR B8
14	Eyebolt Nut	ASTM A194 GR B8	ASTM A193 GR B8	ASTM A194 GR 4	ASTM A194 GR B8
15	Yoke	ASTM A216 GR WCB	ASTM A351 GF CF8	ASTM A216 GR WCB	ASTM A352 GR LCB
16	Stem	ASTM A276 TYPE 410	ASTM A276 TYPE 304	ASTM A182 GR F22	ASTM A276 TYPE 304
17	Stem Nut	ASTM B148 UNS C95600	ASTM F148 UNS C95600	ASTM B148 UNS C95600	ASTM B148 UNS C95600
18	Bearing	-			
19	Grease Cup	Copper Alloy			
20	Stem Nut Retainer	ASTM A108 GR 1020	ASTM A182 GR F304	ASTM A108 GR 1020	ASTM A182 GR F304
21	Handwheel	ASTM A197	ASTM A197	ASTM A197	ASTM A197
22	Handwheel Nut	ASTM A108 GR 1020	ASTM A182 GR F304	ASTM A108 GR 1020	ASTM A182 GR F304

Technical Specification

Design Standard		API600/API603						
Pressure-Temperature Rating		ASME B16.34						
Face-to-face		ASME B16.10						
Flange Ends		ASME B16.5, ASME B16.47						
Butt-welding Ends		ASME B16.25						
Inspection & Test		API598						
Nominal Pressure(Class)		150	300	400	600	900	1500	2500
Test Pressure (MPa)	Shell Test	2.94	7.07	10.24	15.32	22.58	38.30	63.63
	High Pressure Seat Test	2.16	5.62	7.87	11.23	16.55	28.08	45.81
	Low Pressure Seat Test	0.6						
Applicable Temperature		-190°C ~ 550°C(Different raw material for different working temperature)						
Applicable Medium		Water, oil, gas and other causticity medium(Different raw material for different medium)						

Design of Forged Steel Gate Valve



Material list for main parts

No.	Part name	ASTM			
		Carbon steel		Stainless steel	Ni alloy steel
1	Body	A175	F51 F3	A182 F304	A182 F11, F22
2	Seal	A182F6a	A182F6a	A182 F304	A182 F11, F22
3	Wedge	A182F6a	A182F6a	A182 F304	A182 F6a
4	Stem	A276-410	A276-410	A276-304	A276-410
5	Gasket	Graphite +304			
6	Sealing Ring	Graphite			
7	Yoke	A216-WCB	A216-WCB	A551 CF3	A216-WCB
8	Bonnet	A175	A350 LF2/LF3	A182 F304	A182 F11, F22
9	Ball	A193 B7	A320L7	A193 B6	A193 B16
10	Packing	Graphite			
11	Stem Bushing	A276-410	A276-410	A276-304	A276-410
12	Band	A216-WCB	A216-WCB	A551 CF3	A216-WCB
13	Eye Bolt	A193 B7	A320L7	A193 B6	A193 B7
14	Stem Nut	A276-410			
15	Handwheel	A197 or A47-32510			

Performance specification

Nominal Pressure		Class						
		150	300	600	800	900	1500	2500
Test Pressure (MPa)	Shell Test	2.94	7.67	16.32	20.43	22.38	38.50	63.93
	High Pressure Seal Test	2.16	6.62	11.23	14.55	16.55	28.05	46.81
	Low Pressure Seal Test	0.6						
Applicable Temperature		≤425℃						
Applicable Medium		Water, oil & gas						