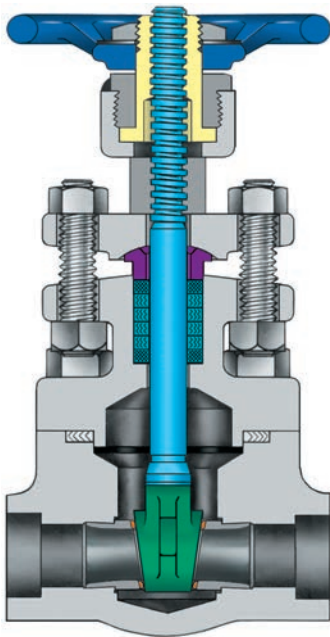


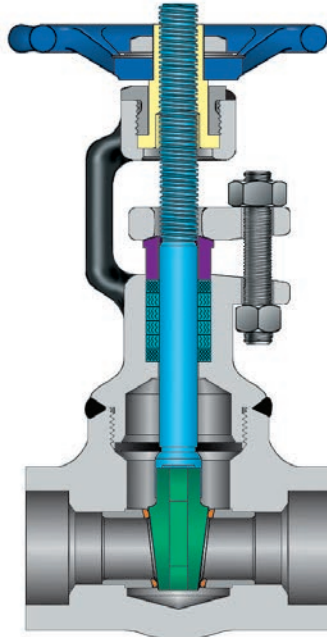
VELAN FORGED STEEL GATE VALVES

THREADED, SOCKET WELD AND FLANGED

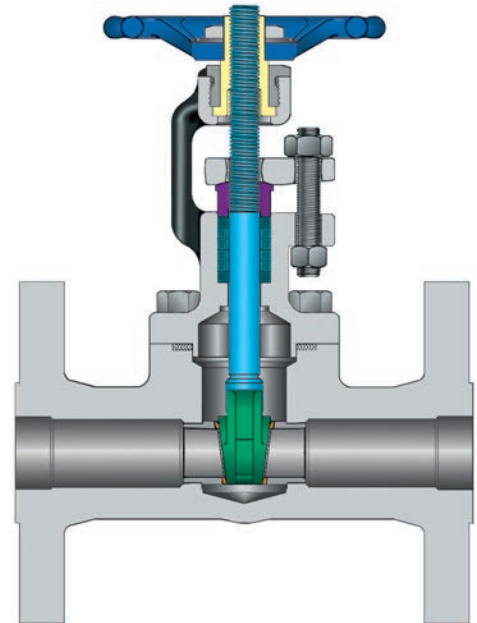
NPS ¼–2 (DN 8–50), ASME CLASS 800 (1975 psi @ 100°F),
ASME CLASS 1500 (3705 psi @ 100°F), FLANGED ASME CLASSES 150, 300, 600, 1500



BOLTED BONNET
2054B – Class 800
3054B – Class 1500



WELDED BONNET
2054W – Class 800
3054W – Class 1500



FLANGED BOLTED BONNET
0054B – Class 150 2054B – Class 600
1054B – Class 300 3054B – Class 1500

DESIGN FEATURES

- Complies to API 602 and ASME B16.34 standards.
- A compact but extremely sturdy design for high pressure-temperature service.
- Solid CoCr alloy wedge (optional) ensures low friction and long service life.
- Packing rings are pre-compressed in the packing chamber to ensure equal stress distribution, effectiveness of all rings and a high integrity seal.
- For welded bonnet valves, the bonnet is threaded in and torqued to an engineered torque value and the body bonnet joint is strength-welded, offering double protection against leakage. (body/bonnet threads and strength-weld).
- Fully guided wedge reduces wear on seating surfaces.
- Repairable 2-piece stem drive.

OPTIONAL FEATURES (SPECIAL APPLICATIONS)

- For highly critical applications or situations where the valve end connections may undergo non-mandatory PWHT, seal-welded seat rings are available as a factory option.
- A special design is also available with double packing, leak-off connection, live-loading and a packing blowout for easy removal of old packing.
- Bolted bonnet gate valves for alkylation service (HF acid service see page 21).
- Parallel slide gate valves.
- API 603 NPS ½–1½ (DN 15–40), for ASME Classes 150, 300, and 600.

PART	STANDARD MATERIALS
Body	A105
Bonnet	A105
Gasket	Gr. 304 (stainless & graphite)
Packing flange	A105
Seat	Gr. 410 (stainless) HF CoCr alloy
Wedge	CA15 HT or CoCr alloy
Stem	Gr. 410 (stainless)
Stem nut	Gr. 416 (stainless)
Yoke bushing	12L14 steel
Gland	Gr. 416 (stainless)
Packing	Graphite
Gland bolt	Gr. B6
Gland nut	Gr. 2H
Cap screw	Gr. B7
Handwheel	Malleable iron
Handwheel nut	Steel
Handwheel lockwasher	Steel
Name plate	Aluminum

For other materials, trims, and engineering data, see pages 23–35.

VELAN FORGED STEEL GATE VALVES

BOLTED BONNET GATE DIMENSIONS AND WEIGHTS

Size NPS DN	A Port		B End-to-end		C Center-to-top, closed		D Center-to-top, open		H Handwheel		K Socket weld bore	L Socket weld depth	Weight lb kg	
	800	1500	800	1500	800	1500	800	1500	800	1500			800	1500
	1/4 ⁽¹⁾ 8	0.25 6	0.25 6	3.13 80	4.00 102	4.81 122	7.13 181	5.31 135	7.75 197	3.00 76			3.50 89	0.555 14.1
3/8 ⁽¹⁾ 10	0.25 6	0.35 9	3.13 80	4.00 102	4.81 122	7.13 181	5.31 135	7.75 197	3.00 76	3.50 89	0.690 17.5	0.38 9.5	3.30 1.5	11.00 5.0
1/2 ⁽¹⁾ 15	0.38 10	0.50 13	3.13 80	4.00 102	4.81 122	7.13 181	5.31 135	7.75 197	3.00 76	3.50 89	0.855 21.7	0.38 9.5	3.30 1.5	11.00 5.0
3/4 20	0.50 13		3.25 83	5.00 127	5.91 150	7.25 184	6.75 171	7.88 200	3.50 89	3.50 89	1.065 27.1	0.50 12.7	5.30 2.4	13.00 5.9
1 25	0.69 18		3.50 89	6.00 152	6.38 162	8.70 221	7.38 188	9.63 244	3.50 89	5.00 127	1.330 33.8	0.50 12.7	6.40 2.9	26.00 11.8
1 1/4 32	1.25 32		5.00 127	7.00 178	7.77 197	9.12 232	9.12 232	10.63 270	4.75 121	6.00 152	1.675 42.5	0.50 12.7	15.00 6.8	34.00 15.4
1 1/2 40	1.25 32		5.00 127	7.00 178	7.77 197	9.12 232	9.12 232	10.63 270	4.75 121	6.00 152	1.915 48.6	0.50 12.7	15.00 6.8	34.00 15.4
2 50	1.50 38		5.25 133	9.00 229	8.70 221	10.56 268	10.40 264	12.30 312	6.00 152	10.00 254	2.406 61.1	0.63 15.9	19.00 8.6	58.00 26.3

(1) Only for A105 (carbon) and A182 (stainless F316/F316L) body material in socket weld, threaded, butt weld or combination weld ends and 800 pressure class.
All other materials in 800 pressure class, refer to the NPS 3/4 (DN 20) design.

FLANGED FACE-TO-FACE

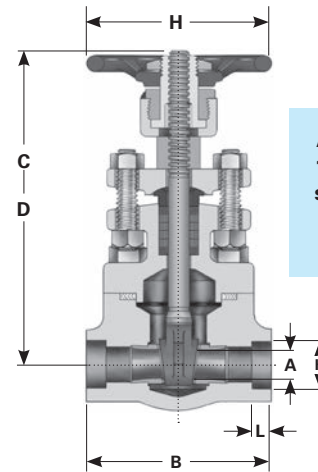
Size NPS DN	Flanged face-to-face				
	150	300	600	1500	2500
1/4 ⁽²⁾ 8	4.00 102	5.50 139	6.50 165	8.50 216	-
3/8 ⁽²⁾ 10	4.00 102	5.50 139	6.50 165	8.50 216	-
1/2 ⁽²⁾ 15	4.25 108	5.50 139	6.50 165	8.50 216	10.38 264
3/4 20	4.62 117	6.00 152	7.50 191	9.00 229	10.75 273
1 25	5.00 127	6.50 165	8.50 216	10.00 254	12.12 308
1 1/4 32	5.50 140	7.00 178	9.00 229	11.00 279	13.75 349
1 1/2 40	6.50 165	7.50 191	9.50 241	12.00 305	15.12 384
2 50	7.00 178	8.50 216	11.50 292	14.50 368	17.75 451

(2) Only for A105 (carbon) and A182 (stainless F316/F316L) body material in RF end connections, bolted bonnet design and pressure classes 150, 300, and 600.
All other materials in pressure classes 150, 300, and 600, refer to the NPS 3/4 (DN 20) design.

BOLTED BONNET GATE FULL PORT DIMENSIONS AND WEIGHTS

Size NPS DN	A Port	B End-to-end		C Center-to-top, closed		D Center-to-top, open		H Handwheel		K Socket weld bore	L Socket weld depth	Weight lb kg	
		800	1500	800	1500	800	1500	800	1500			800	1500
		1/4 8	0.25 6	3.25 83	4.00 102	5.90 150	7.10 180	6.63 168	7.8 198			3.50 89	3.50 89
3/8 10	0.35 9	3.25 83	4.00 102	5.90 150	7.10 180	6.63 168	7.8 198	3.50 89	3.50 89	0.690 17.5	0.38 9.5	6.20 2.8	10 4.5
1/2 15	0.50 13	3.25 83	4.00 102	5.90 150	7.10 180	6.63 168	7.88 200	3.50 89	3.50 89	0.855 21.7	0.38 9.5	6.20 2.8	12.00 5.4
3/4 20	0.69 18	3.50 89	6.00 152	6.40 162	9.10 231	7.40 188	9.60 244	4.75 121	4.75 121	1.065 27.1	0.50 12.7	6.60 3.0	24.00 10.9
1 25	0.96 24	5.00 127	7.00 178	7.80 198	9.10 231	9.10 231	10.60 269	6.00 152	6.00 152	1.330 33.8	0.50 12.7	15.00 6.8	32.00 14.5
1 1/4 32	1.25 32	5.00 127	7.00 178	7.80 198	9.10 231	9.10 231	10.60 269	6.00 152	6.00 152	1.675 42.5	0.50 12.7	15.00 6.8	32.00 14.5
1 1/2 40	1.50 38	5.25 133	9.00 229	8.60 218	10.60 269	10.40 264	12.30 312	6.00 152	10.00 254	1.915 48.6	0.50 12.7	20.00 9.1	50.00 22.7
2 50	2.00 ⁽³⁾ 51	6.00 152	9.00 229	10.90 277	11.50 292	13.12 333	13.75 349	8.00 203	10.00 254	2.406 61.1	0.63 15.9	24.00 10.9	60.00 27.2

(3) 1.89" (48 mm) Class 1500



Also see page 17 for bellows seal valves for emission-free service.

WELDED BONNET GATE VALVE DIMENSIONS AND WEIGHTS

Size NPS DN	A Port	B End-to-end		C Center-to-top, closed		D Center-to-top, open		H Handwheel		K Socket weld bore	L Socket weld depth	Weight lb kg	
		800	1500	800	1500	800	1500	800	1500			800	1500
		1/4 ⁽⁴⁾ 8	0.25 6	2.88 73	3.5 89	4.63 117	6.4 163	5.13 130	7.1 180			3 76	3.5 89
3/8 ⁽⁴⁾ 10	0.25 6	2.88 73	3.5 89	4.63 117	6.4 163	5.13 130	7.1 180	3 76	3.5 89	0.69 17.5	0.38 9.5	2.5 1.1	6.5 2.9
1/2 ⁽⁴⁾ 15	0.38 10	2.88 73	3.5 89	4.63 117	6.4 163	5.13 130	7.1 180	3 76	3.5 89	0.855 21.7	0.38 9.5	2.5 1.1	6.5 2.9
3/4 20	0.5 13	3.25 83	3.5 89	5.9 150	6.4 163	6.63 168	7.1 180	3.5 89	3.5 89	1.065 27.1	0.50 12.7	4.4 2	6.8 3.1
1 25	0.69 18	3.5 89	5 127	6.3 160	8.1 206	8.1 182	8.9 226	3.5 89	4.75 121	1.330 33.8	0.50 12.7	5.3 2.4	13 5.9
1 1/4 32	1.25 32	5 127	5.25 133	7.7 197	9.4 239	9.12 231	10.8 274	4.75 121	6 152	1.675 42.5	0.50 12.7	11 5	20 9.1
1 1/2 40	1.25 32	5 127	5.25 133	7.7 197	9.4 239	9.12 231	10.8 274	4.75 121	6 152	1.915 48.6	0.50 12.7	11 5	20 9.1
2 50	1.5 38	5.25 133	10 254	8.5 216	12.4 315	10.4 264	14.1 358	6 152	10 254	2.406 61.1	0.63 15.9	16 7.3	50 22.7

WELDED BONNET FULL PORT GATE VALVE DIMENSIONS AND WEIGHTS

Size NPS DN	A Port	B End-to-end		C Center-to-top, closed		D Center-to-top, open		H Handwheel		K Socket weld bore	L Socket weld depth	Weight lb kg	
		800	1500	800	1500	800	1500	800	1500			800	1500
		1/2 ⁽⁴⁾ 15	0.5 13	3.25 83	3.5 89	5.9 150	6.4 163	6.7 170	7.1 180			3.5 89	3.5 89
3/4 20	0.69 18	3.5 89	5 127	6.2 157	8 203	7 178	8.8 224	4.8 122	4.8 122	1.065 27.1	0.50 12.7	5.3 2.4	14 6.4
1 25	0.96 24	5 127	5.25 133	7.8 198	9.4 239	9.1 231	10.8 274	6 152	6 152	1.330 33.8	0.50 12.7	11 5	20 9.1
1 1/4 32	1.25 32	5 127	5.25 133	7.8 198	9.4 239	9.1 231	10.8 274	6 152	6 152	1.675 42.5	0.50 12.7	11 5	20 9.1
1 1/2 40	1.5 38	5.25 133	10 254	8.8 224	12.4 315	10.4 264	14.1 358	6 152	10 254	1.915 48.6	0.50 12.7	16 7.3	50 22.7
2 50	2 51	6 152	10 254	10.9 277	12.1 307	13.1 333	14.3 363	8 203	10 254	2.406 61.1	0.62 15.7	21 9.5	60 27.2

(4) Only for A105 (carbon) body material in socket weld, threaded, butt weld or combination weld ends and 800 pressure class.
All other materials in 800 pressure class, refer to the 3/4" design.