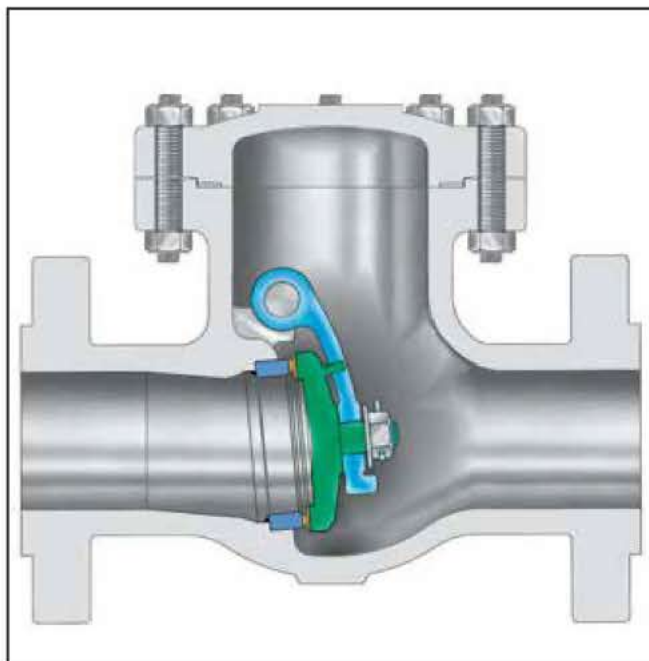


VELAN CAST STEEL API 594 SWING CHECK VALVES

CAST CARBON, STAINLESS OR ALLOY STEEL

NPS 2–48 (DN 50–1200), ASME CLASSES: 150–1500



STANDARD MATERIALS

PART	MATERIALS			
Body ⁽¹⁾	WCB	WC6	WC9	CF8M
Seat ⁽¹⁾⁽²⁾	CoCr alloy faced CS	CoCr alloy faced F11	CoCr alloy faced F22	CoCr alloy faced F316
Hinge pin ⁽¹⁾	SS 410			SS 316
Gasket ⁽¹⁾	Spiral wound stainless steel/graphite			
Cover stud	Gr. B7	B16		B8M Cl. 2
Cover nut	Gr. 2H	Gr. 7		Gr. 8M
Cover ⁽¹⁾	WCB	WC6	WC9	CF8M
Washer	Commercial			
Disc ⁽¹⁾	CA 15 or 13Cr faced WCB	CA 15 or 13Cr faced WC6	CA 15 or 13Cr faced WC9	CF8M
Disc hanger	WCB	WC6	WC9	CF8M
Disc nut	Gr. 2H	Gr. 4		Gr. 8M

(1) Other materials available.

(2) Hardfaced.

For Forged steel check valves, ASME Classes 900–2500
See our on-line catalog (CAT-PS) at www.velan.com.

Design features

- Body and cover.**
Precision machined castings.
Exclusive: Disc shaft does not penetrate body.
- Body and cover joint.**
Accurately machined, fully-enclosed gasket (gasket materials on page 4).
- Disc.**
Robust one-piece construction to withstand the severe shock of check valve service. Hardfaced with 13Cr, CoCr alloy, SS 316, or Monel, ground and lapped to a mirror finish. Sizes NPS 2–6 (DN 50–150) may have solid CA 15 (13Cr) disc. SS 316 disc with CoCr alloy facing also available.
- Disc assembly.**
Non-rotating disc is fastened securely to disc hanger with a lock nut and cotter pin. Disc hanger is supported on a sturdy disc carrier hinge pin of excellent bearing qualities. All parts are accessible from top for easy servicing.
- Flanges:**
ASME Classes 150–300: 1/16" raised face.
ASME Classes 600–1500: 1/4" raised face.
Finish 125–250 AARH for all valves.

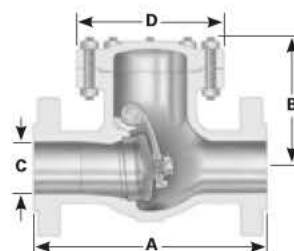
DESIGN SPECIFICATIONS

ITEM	APPLICABLE SPECIFICATION
General design	API 594
Wall thickness	API 594
Pressure-temperature rating	ASME B16.34
Face-to-face dimensions for butt weld and flanged valves	ASME B16.10
Flange design	ASME B16.5
Butt welding design	ASME B16.25
Materials	ASTM

See page 22 and 23 for valve weights and CVs.

Other sizes on application.

CLASS	FIGURE NUMBER	CLASS	FIGURE NUMBER
150	0114C	900	7114C
300	1114C	1500	3114C
600	2114C		



CHECK VALVE DIMENSIONS

SIZE NPS DN	ASME CLASS 150				ASME CLASS 300				ASME CLASS 600				ASME CLASS 900				ASME CLASS 1500			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
2 50	8 203	5.75 146	2 51	6.75 171	10.50 267	6 152	2 51	6.75 171	11.50 292	6.25 159	2 51	6.75 171	14.50 368	9.50 241	1.88 48	8.63 219	14.50 368	9.50 241	1.88 48	8.63 219
2½ 65	8.50 216	6.25 159	2.50 64	6.75 171	11.50 292	6.25 159	2.50 64	6.75 171	13 330	6.50 165	2.50 64	7.50 191	16.50 419	10 254	2.25 57	9.25 235	16.50 419	10 254	2.25 57	9.25 235
3 80	9.50 241	7.75 197	3 76	8.50 216	12.50 318	7.75 197	3 76	8.50 216	14 356	8.75 222	3 76	9.75 248	15 381	10.50 267	2.88 73	10.50 267	18.50 470	11.50 292	2.75 70	10.50 267
4 100	11.50 292	8.75 222	4 102	10.25 260	14 356	8.75 222	4 102	10.25 260	17 432	9.25 235	4 102	12 305	18 457	11.75 299	3.88 99	12.25 311	21.50 546	12 305	3.63 92	12.25 311
6 150	14 356	10.75 273	6 152	12.50 318	17.50 445	10.75 273	6 152	12.50 318	22 559	11.50 292	6 152	15.75 400	24 610	15 381	5.75 146	15.25 387	27.75 705	16.50 419	5.38 137	16 406
8 200	19.50 495	12.75 324	8 203	15.75 400	21 533	12.75 324	8 203	15.75 400	26 660	13.50 343	7.88 200	15.75 400	29 737	19.25 489	7.50 191	18.38 467	32.75 832	21 533	7 178	20.75 527
10 250	24.50 622	15.50 394	10 254	18.50 470	24.50 622	16.25 413	10 254	18.50 470	31 787	16.75 425	9.75 248	19.50 495	33 838	21.98 558	9.38 238	22.25 565	39 991	23.93 608	8.75 222	22.75 578
12 300	27.50 699	17 432	12 305	20.50 521	28 711	17 432	12 305	20.50 521	33 838	18.50 470	11.75 298	22.50 572	—	—	—	—	—	—	—	—
14 350	31 787	19.63 499	13.25 337	23 584	33 838	19.63 499	13.25 337	23 584	35 889	20.93 532	12.88 327	26.25 667	—	—	—	—	—	—	—	—
16 400	34 864	22 559	15.25 387	26.50 673	34 864	22.50 572	15.25 387	26.50 673	39 991	23.38 594	14.75 375	28.25 718	—	—	—	—	—	—	—	—
18 450	38.50 978	25 635	17.13 435	28.50 724	38.50 978	25 635	17.13 435	28.50 724	43 1092	28.67 728	16.50 419	31.50 800	—	—	—	—	—	—	—	—
20 500	38.50 978	26.50 673	19 483	31.50 800	40 1016	26.50 673	19 483	31.50 800	47 1194	27.12 689	18.25 464	35.25 895	52 1320	34.95 887	17.50 444	37.25 946	—	—	—	—
24 600	51 1295	31.25 794	23.25 591	37 940	53 1346	31.25 794	23.25 591	37 940	55 1397	35.69 907	22 559	40.25 1022	—	—	—	—	—	—	—	—
26 650	51 1295	32.63 829	25 635	37.25 946	—	—	—	—	57 1448	38.49 980	23.75 603	44 1118	—	—	—	—	—	—	—	—
28 700	57 1448	36.55 928	27 686	42 1067	59 1499	36.55 928	27 686	42 1067	—	—	—	—	—	—	—	—	—	—	—	—
30 750	60 1524	36.89 937	29.25 743	44.50 1130	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32 800	64 1626	40.30 1026	30.75 781	47.25 1200	—	—	—	—	—	—	—	—	70 1778	47.56 1280	25.25 641	50 1270	—	—	—	—
34 850	—	—	—	—	64 1626	42.38 1076	32.75 832	48.75 1238	—	—	—	—	—	—	—	—	—	—	—	—
36 900	77 1956	41.78 1061	35.25 895	53 1346	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
38 950	80 2032	47.01 1194	36.63 930	53 1346	—	—	—	—	—	—	—	—	81.50 2070	50.38 1280	30 762	57 1448	—	—	—	—
42 1050	78 1981	49.72 1263	37.88 962	63.50 1613	78 1981	53.22 1352	37.88 962	63.50 1613	—	—	—	—	—	—	—	—	—	—	—	—
48 1200	94 2388	55 1397	46 1168	61 1549	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—