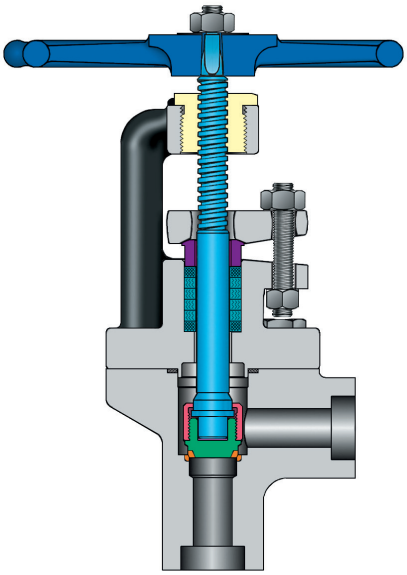
Boiler plant service blowoff valves

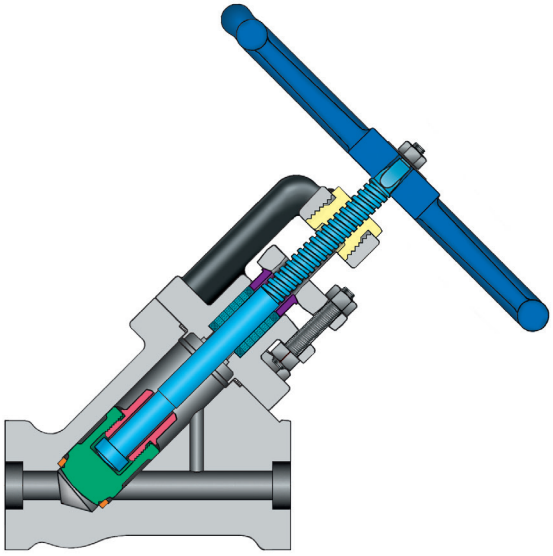
Quick sheet

Flanged or welded ends

NPS ½ – 2 (DN 15 – 50), ASME Classess 600, 1500



Angle



45° Inclinded bolted bonnet

Design features

These special blowoff valves are available in bolted bonnet angle and streamlined flow 45° inclined designs for Class 600 and 1500 primary service and in bonnetless angle and inclined designs for Class 2500.

- Complies to ASME B16.34 standards.
- CoCr alloy seats and fully-guided CoCr alloy discs resist the excessive corrosion and erosion effects aggravated by grid and boiler scale particles and high temperature changes.

Velan boiler blowoff valves meet all applicable specifications of the ASME boiler code, U.S. military standards (listed on qualified product list), U.S. Coast Guard, American Bureau of Shipping and Lloyd's.

Flanged or welded ends	Class 600[1]	Class 1500	Class 2500
Basic steam rating	535 psi @ 850°F	1340 psi @ 850°F	2230 psi @ 850°F
Maximum boiler pressure	935 psi	2455 psi	3206 psi
Maximum non-shock	1480 psi @ 100°F	3705 psi @ 100°F	6170 psi @ 100°F

(1) Use for Classes 300 and 400 boilers.

Figure numbers

ASME Class	Angle	45° inclined
600	2215B	2216B
1500	3215B	3216B

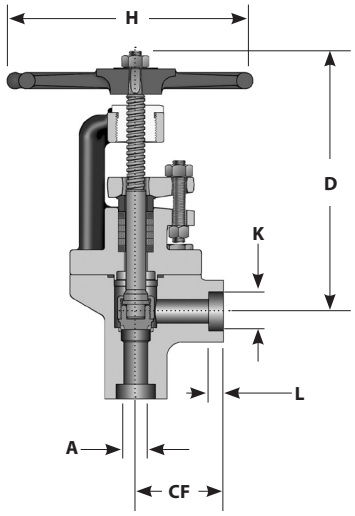
Applications

- Power and utility boilers
- Cogeneration systems
- Chemical recovery boilers
- Wood-fired boilers
- Solid waste fuel-firing systems
- Circulating fluidized bed (CFB) boilers
- Industrial waste recovery and incineration plants

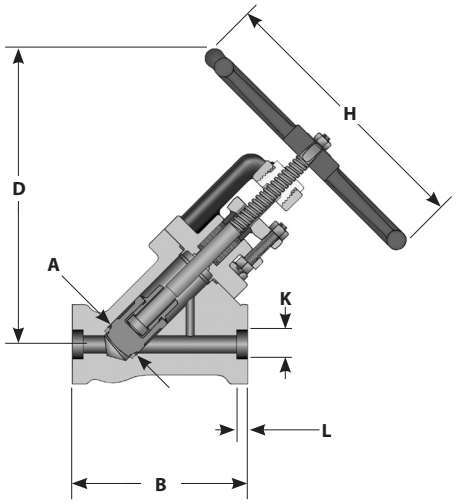
Typical services

- Blowoff
- Acid cleaning
- Steam sampling
- Water/steam shut-off
- Gauge shut-off
- Main stop drains
- Chemical feed
- Vents
- Feedwater

Many installations use a tandem combination of two valves. he valve closer to the boiler should be wide open first and then the second valve opened slowly. At the end of the blowoff period, a reverse procedure should be used.



A = Port
B = End-to-end (45° inclinded valve)
CF = Center-to-end (Angle valve)
D = Center-to-top, open
H = Handwheel
K = Socket weld bore
L = Socket weld depth



Angle valve dimensions, weights, and C_Vs[1]

Size NPS DN	ASME Class 600								Size NPS DN	ASME Class 1500							
	A	CF	D	H	K	L	lb / kg	C_V		A	CF	D	H	K	L	lb / kg	C_V
½ 15	0.453 11.5	2 51	7.88 200	6 152	0.855 21.7	0.38 9.5	13 6	5	½ 15	0.453 11.5	2 51	7.88 200	6 152	0.855 21.7	0.38 9.5	13 6	5
¾ 20	0.625 15.9	2.5 64	8.13 207	6 152	1.065 27.1	0.5 12.7	15 7	9	¾ 20	0.625 15.9	2.5 64	8.13 207	6 152	1.065 27.1	0.5 12.7	15 7	9
1 25	1 25.4	3 76	10.25 260	8 203	1.33 33.8	0.5 12.7	20 9	20	1 25	1 25.4	3 76	10.25 260	8 203	1.33 33.8	0.5 12.7	20 9	20
1¼ 32	1.448 36.8	3.5 89	10.56 268	12 305	1.675 42.5	0.5 12.7	45 20	33	1¼ 32	1.448 36.8	3.5 89	10.56 268	12 305	1.675 42.5	0.5 12.7	45 20	33
1½ 40	1.448 36.8	3.5 89	10.56 268	12 305	1.915 48.6	0.5 12.7	45 20	60	1½ 40	1.448 36.8	3.5 89	10.56 268	12 305	1.915 48.6	0.5 12.7	45 20	60
2 50	1.75 44.5	4.5 114	12.31 313	12 305	2.406 61.1	0.63 15.9	48 22	84	2 50	1.75 44.5	4.5 114	12.31 313	12 305	2.406 61.1	0.63 15.9	48 22	84

45° inclined valve dimensions, weights, and C_Vs[1]

Size NPS DN	ASME Class 600								Size NPS DN	ASME Class 1500							
	A	B	D	H	K	L	lb / kg	C_V		A	B	D	H	K	L	lb / kg	C_V
1 25	1.5 38.1	8 203	15.2 386	12 305	1.33 33.8	0.5 12.7	44 20	10	1 25	1.5 38.1	8 203	15.2 386	12 305	1.33 33.8	0.5 12.7	44 20	10
1½ 40	1.5 38.1	8 203	15.2 386	12 305	1.915 48.6	0.5 12.7	44 20	60	1½ 40	1.5 38.1	8 203	15.2 386	12 305	1.915 48.6	0.5 12.7	44 20	60
2 50	1.5 38.1	8 203	15.2 386	12 305	2.406 61.1	0.63 15.9	44 20	60	2 50	1.5 38.1	8 203	15.2 386	12 305	2.406 61.1	0.63 15.9	44 20	60

(1) Contact Velan for flanged valve dimensions and weights.

Note: C_V refers to low coefficients. K_V is the metric equivalent of C_V. $K_V = C_V \times 0.85$.