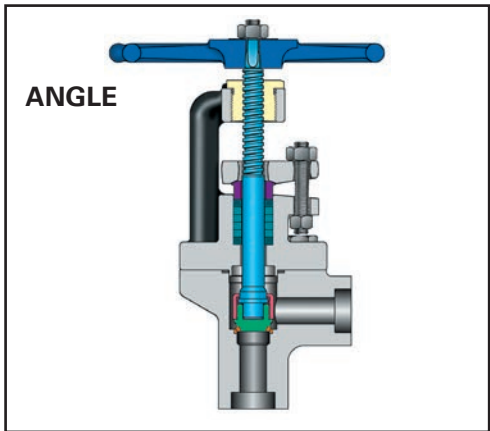
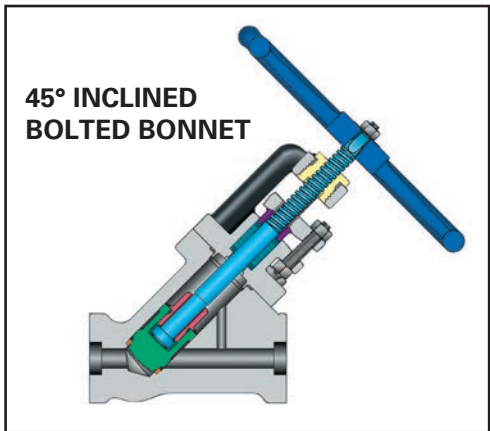


# VELAN SPECIAL SERVICES

## BOILER PLANT SERVICE BLOWOFF VALVES



ANGLE



45° INCLINED  
BOLTED BONNET

### NPS 1/2–2 (DN 15–50) FLANGED OR WELDED ENDS

#### ASME CLASSES 150–1500

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*	Class 1500	Class 2500
<b>Basic steam rating</b>	535 psi @ 850°F	1340 psi @ 850°F	2230 psi @ 850°F
<b>Max. boiler pressure</b>	935 psi	2455 psi	3206 psi
<b>Maximum non-shock</b>	1480 psi @ 100°F	3705 psi @ 100°F	6170 psi @ 100°F

\* Use for Classes 300 and 400 boilers.

### 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 SERVICE

- 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. The 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.

### DESIGN FEATURES

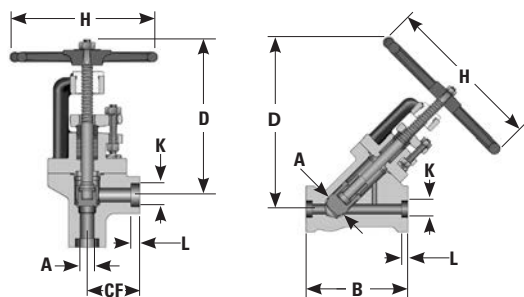
These special blowoff valves are available in bolted bonnet angle and streamlined flow 45° inclined designs for Class 600 and 1500 primary service and in bonnetless angle and inclined designs for Class 2500.

- 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.

**NOTE:** See page 12 for Y-pattern globe valves or for more information consult Velan's Y-pattern globe valve catalog (CAT-BG) at [www.velan.com](http://www.velan.com).

### FIGURE NUMBERS

CLASS	ANGLE	45° INCLINED
600	2215B	2216B
1500	3215B	3216B



### 45° INCLINED VALVE DIMENSIONS<sup>(1)</sup>

SIZE NPS DN	A Port	B End-to-end weld end	D Center-to- top, open	H Handwheel diameter	K Socket weld bore	L Socket weld depth
	600 & 1500	600 & 1500	600 & 1500	600 & 1500	600 & 1500	600 & 1500
1	1.50	8.00	15.20	12.00	1.330	0.50
25	38.1	203	386	305	33.8	12.7
1½	1.50	8.00	15.20	12.00	1.915	0.50
40	38.1	203	386	305	48.6	12.7
2	1.50	8.00	15.20	12.00	2.406	0.63
50	38.1	203	386	305	61.1	15.9

### ANGLE VALVE DIMENSIONS<sup>(1)</sup>

SIZE NPS DN	A Port	CF Center- to-end weld end	D Center-to- top, open	H Handwheel diameter	K Socket weld bore	L Socket weld depth
	600 & 1500	600 & 1500	600 & 1500	600 & 1500	600 & 1500	600 & 1500
½	0.453	2.00	7.88	6.00	0.855	0.38
15	11.5	51	200	152	21.7	9.5
¾	0.625	2.50	8.13	6.00	1.065	0.50
20	15.9	64	207	152	27.1	12.7
1	1	3.00	10.25	8.00	1.330	0.50
25	25.4	76	260	203	33.8	12.7
1¼	1.448	3.50	10.56	12.00	1.675	0.50
32	36.8	89	268	305	42.5	12.7
1½	1.448	3.50	10.56	12.00	1.915	0.50
40	36.8	89	268	305	48.6	12.7
2	1.750	4.50	12.31	12.00	2.406	0.63
50	44.5	114	313	305	61.1	15.9

(1) Contact Velan for flanged valve dimensions and weights

# VELAN SPECIAL SERVICES

## CONTINUOUS BLOWDOWN AND BOILER PLANT SERVICE VALVES

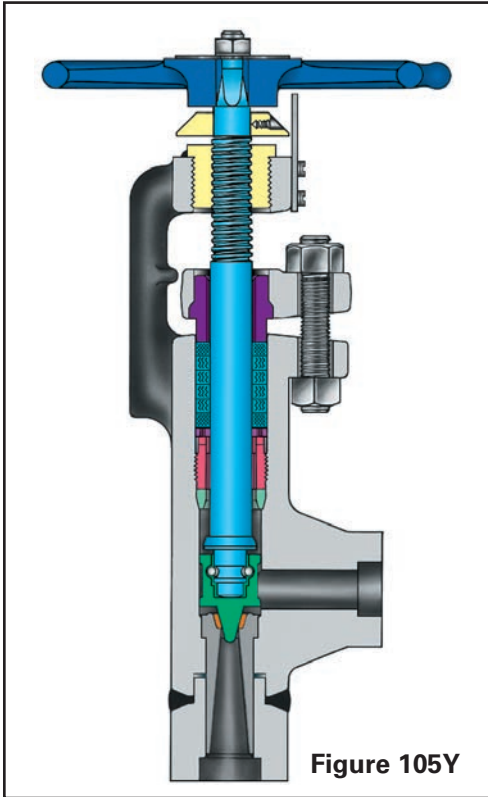


Figure 105Y

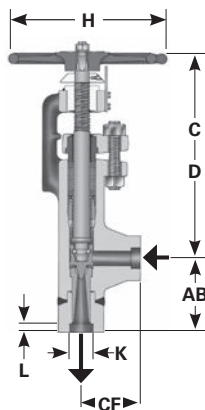
### NPS ½–2 (DN 15–50) FORGED ANGLE

ASME CLASSES 600, 1500, 2500  
COMPLIES TO ASME B16.34 STANDARDS

This valve is designed for continuous blowdown but can also be used for sampling and boiler feed pump bypass relief where high pressure drop causes erosion and cavitation which can destroy conventional globe valves. It incorporates a hardfaced CoCr alloy disc and seat and a venturi diffuser from stainless steel type 316. Orifice range: 1/8 to 1 11/16" (3.18 to 42.86 mm), depending on the capacity required.

### OTHER VELAN FORGED VALVES FOR BOILERS PLANT SERVICE

- Gate and globe, NPS ¼–2 (DN 8–50)  
Bolted and welded bonnet, ASME Classes 800–1500  
–see Pressure seal and bolted bonnet catalog
- Gate and globe, NPS 2½–24 (DN 65–600)  
Bolted or pressure seal, ASME Classes 600–4500
- Swing, piston and tilting disc check valves, NPS ½–24 (DN 15–600)  
Bolted or pressure seal, ASME Classes 600–4500
- Y-Pattern bonnetless globe valves, NPS ¼–4 (DN 8–100), ASME Classes 1690–4500
- Y-Pattern piston check, NPS ¼–4 (DN 8–100)  
ASME Classes 600–4500



For more details about other Velan forged valves for boilers plant service see our other product catalogs on [velan.com](http://velan.com)

Size NPS DN	AB Center-to- bottom	CF Center-to- end	C Center-to- top, closed	D Center-to- top, open	H Handwheel	K	L	Weight lb kg
						Socket weld bore	Socket weld depth	
½ 15	3.45 88	3.19 81	11.9 302	12.6 320	8.00 203	0.855	0.38	28
						21.7	9.5	13
¾ 20	3.62 92	3.19 81	11.9 302	12.6 320	8.00 203	1.065	0.50	28
						27.1	12.7	13
1 25	4.42 112	3.19 81	11.9 302	12.6 320	8.00 203	1.330	0.50	31
						33.8	12.7	14
1½ 40	5.00 127	3.00 76	15.8 401	16.6 422	12.00 305	1.675	0.50	57
						42.5	12.7	26
2 50	6.50 165	5.00 127	18.3 465	19.7 500	12.00 305	2.406	0.63	93
						61.1	15.9	42

### WIDE OPEN CAPACITIES (%) VS HANDWHEEL TURNS (↻)

